HEALTH BUILDING NOTE 35

MCO 140

Accommodation for People with Acute Mental Illness

DEPARTMENT OF HEALTH
and the WELSH OFFICE

Health Building Notes: Preface

Health Building Notes (HBNs) are intended to assist those involved in the briefing and design stages of schemes to provide new health buildings or to adapt or extend existing premises. The Notes contain information on relevant aspects of service objectives, functional requirements, and design. They establish standards of accommodation that are consistent with the functional requirements and form the basis for deriving Cost Allowances.

The functions, activities, equipment, environmental conditions, engineering services, and dimensions which are critical to the efficient performance of an activity, are identified and discussed but no preference for any particular configuration or plan is implied. Optional solutions with cost implications are indicated, where appropriate, leaving local planners to make their own choices.

Reference is made in the Notes to the related Design Briefing System and also to Activity Data sheets which provide the detailed user requirements for each room or space.

Guidance on spaces common to all health buildings has been brought together in HBN 40* 'Common Activity Spaces', to which reference is made where appropriate in each Note.

HBNs are prepared in consultation with representatives of the National Health Service and appropriate professional bodies.

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*HBN 40 –

Volume 1 – Clinical, Sanitary, Administrative and Associated Spaces

Volume 2 – Corridors

Volume 3 – Lifts and Stairways } in preparation

Volume 4 – Designing for Disabled People } in preparation

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Appendix 1 (see separate volume)

Mental Illness: Policies for Prevention, Treatment, Rehabilitation and Care

1 Scope

Introduction

1.1 This Building Note replaces Hospital Building Note 35 (Department of Psychiatry (mental illness) for a District General Hospital), which was issued in 1973. It describes the acute units districts will need to provide as part of the range of facilities required for a district mental health service. Chapter 2 describes service objectives; Chapters 3 and 4 deal with accommodation for the short-term care and treatment of adults* who are acutely mentally ill; Chapters 5 and 6 deal with the accommodation for the assessment and short-term treatment of elderly mentally ill people.† These units form only part of the total service a district will need to provide. Services for mentally ill people are in a state of rapid development, with wide ranging philosophies of care; increasing emphasis on primary and community based care, out-patient and day patient treatment; and co-ordinated services with local authorities and other organisations. There are thus big differences between districts in the amount and type of accommodation required.

1.2 The guidance contained in this Note is based upon the policies promulgated by DHSS, after consultation, and set out in Appendix 1. The Department is engaged in investigating how best both the service and accommodation can be improved to meet the needs of patients, staff and community. To this end, the Worcester Development Project was started in 1968 to provide a comprehensive mental illness service based on departments of DGHs, with day hospital, in-patient and out-patient facilities, together with a range of community services. Most buildings in the project have been evaluated and the results made available in a series of DHSS Mental Health Buildings Evaluation reports. There were changes and developments in service policy and delivery between design and commissioning of buildings, and longer term evaluation of services continues. These evaluations show first the importance of adequate consultation at the planning stage on the nature of the service envisaged, the philosophy of care, and the roles of the care teams working in the buildings; and second the necessity for a flexible approach to building design.

1.3 Some of the main features of the Note are:

a. It reflects the need for a wide range of sizes and mixes of day patient and in-patient hospital accommodation.

b. It is based on the policy that, for adults who are acutely mentally ill and require in-patient care, the minimum provision in a mental illness unit should be two wards;* together with a day hospital† (see Chapter 3); and for elderly mentally ill people, one ward for in-patients for assessment and short-term treatment and a day hospital. (See Chapter 5.)

c. An incremental approach is adopted in this Note, which enables a Health Authority to provide accommodation in the context of its philosophy of care and consequent requirements for accommodation. A day hospital† size range of 10–40 places (in increments of 10 places), and a ward size range of 10–25 beds (in increments of five beds) have been considered: facilities for out-patients, administration and ECT are considered as distinct functional units.

d. To prevent duplication and ensure intensive use of spaces provided in day hospitals, and wards, careful attention is given to the integration of ward and day hospital facilities. Thus, accommodation is indicated for a variety of therapeutic activities in the day hospital which is used in the evening and at the weekend by in-patients and others. Assessment and short-term treatment units will not need fully equipped workshops (4.8).

Inclusions

1.4 This Note provides information on the design of accommodation for the assessment and short-term care and treatment of adults and elderly people, including:

a. day hospitals
b. wards
c. electro-convulsive therapy (ECT)
d. out-patient accommodation
e. administration.

Exclusions

1.5 This Note does not deal with:

a. use of the general hospital out-patients departments for mentally ill people;

b. residential facilities for existing long-stay patients or 'new long-stay' patients (as defined in the White Paper 'Better Services for the Mentally Ill', and discussed in the mental illness policy paper in Appendix 1);‡

***This building note follows a widespread usage in describing as 'adult' services those services which are not intended solely for elderly people. Districts will need to decide to what extent the adult accommodation can be used for some elderly people.**
†It is recognised that this is not a very satisfactory term for these people but is widely understood and is useful in the context of this building note.

***The term 'ward' as used in this building note means the accommodation (bedrooms, any day spaces, service spaces) for a group of patients normally the responsibility of a sister/charge nurse; it does not denote any particular layout. To prevent confusion, patients' bed areas are referred to as 'multi-bed rooms' or 'single bed rooms'.**
†The term 'day hospital' may not now be entirely appropriate, but is well understood and is useful to retain for this Note, although developments are known to be taking place.
‡See also 'Planning Community-based Accommodation for Mentally Ill People'. Report by Medical Architecture Research Unit. (See Bibliography – 'Further reading' section.)

c. long term homely residential care for elderly mentally ill people in the community;

d. accommodation for children and adolescents;

e. units for alcohol and drug misusers;

f. regional secure units.

Design Briefing System (DBS)

1.6 The DBS is a series of notebooks which are used in conjunction with new or revised building notes to help specify user requirements for a Design Brief. Each notebook adopts a check-list approach, providing a framework which guides the project team through the consideration of organisational and planning options, and leads to a list of activity spaces. Although the application of DBS is confined mainly to planning new facilities, it can be used also to prepare a brief for extensive upgrading of existing accommodation.

1.7 A copy of the relevant DBS notebook is issued with each Advance Copy of the Health Building Note. Health Building Notes published by HMSO are accompanied by the relevant DBS notebook. Further information about DBS can be obtained from Room 503 Euston Tower, 286 Euston Road, London NW1 3DN (tel: 01–388 1188, ext 3590).

Capricode

1.8 Capricode is the mandatory procedural framework governing the inception, planning, processing and control of individual health building schemes. The aim of Capricode is to promote a consistent and streamlined approach to capital development that achieves best use of resources through the selection and construction of relevant and cost effective schemes that open on time and within budget. It identifies the main activities and provides a framework for delegation with effective management and the proper accounting for expenditure and performance. (See 'Capricode Health Building Procedures' issued to Health Authorities with HN(86)32.)

Cost allowance

1.9 The Cost Allowance associated with this HBN is promulgated in an Annex to the Health Notice. The room areas in the Schedule in Chapter 9 are those used in preparing the Cost Allowance. They may be used as a guide in preliminary planning, but must under no circumstances be treated as a maximum or as an entitlement.

2 Service Objectives

Service planning

2.1 The guidance in this Note is based upon the general principles of the White Paper 'Better Services for the Mentally Ill', and the mental illness policy paper reproduced in Appendix 1. It is essential that health authorities make a careful, detailed assessment of need and decide upon the way they wish to pursue meeting that need (the 'philosophy of care'). The principal factor is the development of community based services largely on a district basis. Other factors which affect planning include the current policies for hospital provision and co-ordination with local authorities and other organisations. These factors markedly affect the need for hospital accommodation. Ignoring them has resulted in the completion in some places of units which are too large, too restrictive in use, and consequently under occupied and uneconomic. This uneconomic use of accommodation is wasteful of capital and revenue as well as inhibiting the development of a sound community-based service.

2.2 There will be wide variations in the forms services take, arising from differing philosophies of care. It is strongly recommended that, at an early stage of planning, the whole of the guidance contained in this Note should be discussed at a meeting with professional representatives of those who will work in the future multi-disciplinary team. As some of the key people involved in the use of the accommodation may not have been appointed at this early planning or building stage, it would be useful to repeat the meeting at intervals and review decisions as the team comes together. Local Authorities should be consulted on a joint planning basis, as should other relevant organisations in the voluntary and private sectors. The chief ambulance officer should be consulted as some in-patients, day patients and out-patients, especially the elderly, will be dependent upon the ambulance service for transport.

2.3 The unit for mentally ill adults provides a service for patients requiring admission for assessment and short-term treatment. It is not intended that 'new long-stay' or 'old long-stay' patients should be accommodated here as in-patients. The unit should be easily accessible to the community it serves and functionally related to the DGH, though it could be located elsewhere in the district, if this is thought desirable or feasible.

2.4 The assessment and short-term treatment facility for elderly mentally ill people must be provided on the site of a DGH as the assessment of elderly people requires the use of other hospital departments and direct liaison with the geriatric department.

2.5 The units for both mentally ill adults and elderly people with mental illness will normally comprise day hospitals with supporting wards and out-patient facilities. The number of beds required will need to be established by each Health Authority, as will day and out-patient facilities, which are likely also to be established at a number of locations about the district. These services for diagnosis, treatment and rehabilitation must have a base for management and organisation. For adults, this might be in the mental illness unit (see Chapter 3) or be elsewhere in the district. The base from which the services for elderly mentally ill people is organised and managed could be the assessment and short-term treatment unit which is part of the DGH, or associated with the geriatric department, or be separate from both. Both bases will be focal points for specialist therapeutic teams providing service and advice generally to the district.

2.6 To ensure that there is no over-provision of new accommodation, project teams should first evaluate the utilisation of similar existing facilities in relation to their workload and staffing. Furthermore, new building should initially be limited to the necessary minimum, so as to facilitate the development of a comprehensive, community based service. Additional accommodation can be considered as this develops and is shown to be needed. It is to this end that an incremental approach is adopted in this building note.

2.7 Where in-patient facilities are provided in the unit for mentally ill adults, there should be a minimum of two wards, with a minimum of 10 beds per ward. A ward should not normally have more than 25 beds in single and multi-bedrooms. Within the range of 10 to 25 beds, increments in bed provision of five are recommended. A day hospital should have at least 10 places. It is recommended that day place provision should rise in increments of 10 places to a maximum of 40 for each day hospital. When authorities wish to provide more day hospital places, then an appropriate combination of day hospital sizes should be provided. For elderly mentally ill people the range is as above, but the minimum provision should be one ward and a day hospital (See para 5.6).

2.8 Experience has shown that very few adult in-patients will need to remain in their wards during the day. They will nearly all be mobile and able to leave the ward to spend the day in a day hospital or elsewhere as part of their treatment programmes.

2.9 Where wards are functionally integrated with the day hospital(s) the dining, sitting and recreation facilities in the day hospital(s) can be used by in-patients in the evening and at the weekend. This has significant implications for organisation as well as design, blurring as it does, the spatial distinction between ward and day hospital. This type of ward is defined as a 'bed-annex' ward (3.10). The

way this complex set of spaces is to be managed will need careful, detailed discussions and agreement (3.7).

2.10 It may be decided that some patients will need the facilities of a 'self contained' ward (3.10). The increased capital and revenue consequences of such provision will need to be borne in mind when they are considered by project teams as will the implications in sizing day hospital provision, to prevent unnecessary duplication of services and facilities.

3 Adult People with Acute Mental Illness – General Functional and Design Requirements

Introduction

3.1 This Chapter provides general design guidance based on the service objectives outlined in Chapter 2. Information on a range of topics and environmental matters which should be taken into account when designing accommodation is given in Chapter 7.

General considerations

3.2 As indicated in Chapters 1 and 2, each health authority will need to decide on the pattern of mental illness services it is to provide: however, the accommodation required on one or more sites will usually include:

a. day hospital(s)
b. wards
c. ECT suite
d. out-patient accommodation
e. administration.

The adult mental illness unit may be part of the DGH complex and may include all the above.

3.3 The guidance given in this Note concerning in-patients takes a different approach from that in HBN 4 – Wards* which deals with the standard design of wards for adults with acute physical illness. The approach in HBN 4 is recognised as being inappropriate for people with mental illness – the major difference being in the more homely atmosphere needed to ensure that the unit has an ethos suitable for those who are mentally ill. The sole function of the accommodation is to meet patients' needs and to assist staff in meeting them.

Location

3.4 A district will need accommodation at a number of locations within the community. This will include for example community based day hospitals and/or mental health resource centres of various sizes offering local bases for the mental health services and community psychiatric nursing service which will link with primary health care services, and residential accommodation for long-stay patients.

3.5 When siting mental illness units with in-patient accommodation the following factors should be taken into account:

a. If the unit is on a DGH site, it should be planned as a functionally self-contained unit, with easy access to catering and other service and diagnostic/treatment departments. It should also have a separate entrance.

b. It is essential that the mental illness unit, if located on a DGH site, has direct access on to usable open space.

c. The possibility should be considered of using facilities outside the unit, if located as part of the DGH complex, (eg hospital chapel, staff changing and staff dining), or those in the immediate community (eg playing fields, local parks).

d. The whole accommodation should be at ground level if possible. The day hospital should always be on the ground floor, although wards may be on the first floor. If two-storey accommodation is provided a lift or lifts will be required.

e. There should be adequate space for parking and manoeuvring of vehicles, especially in relation to the day hospital.

f. Fire fighting and evacuation routes.

3.6 Patients for admission will arrive at the unit entrance by ambulance, by car, or on foot, at any time; a few patients will be transferred from the DGH Accident and Emergency Department or other in-patient accommodation. Day patients will arrive at peak times in the morning and early afternoon, leaving at lunch-time or at the end of the afternoon. Evening use of the day hospital should be encouraged and planned for. Out-patients may arrive and leave at varying times. Professional and other visitors will attend throughout the week: adequate parking space for them is most important.

Components of accommodation

Day hospital

3.7 Where the day hospital is part of an in-patient unit it should be adjacent to, and functionally integrated with, the bed-annex ward or wards and associated with any self contained ward (3.10). Most in-patients from bed-annex wards will be in the day hospital throughout the day and will use day hospital accommodation in the evening and weekend outside the normal working hours of therapy staff, taking meals in the day hospital dining area, as will any day patients. Districts will need to decide to what extent day patients should be separated from in-patients.

3.8 Thus, day hospitals should be designed with a multiplicity of relatively small areas which are capable of varied use. Rooms will be required for therapy staff, who will include:

a. Occupational therapists, who will require provision for 'activities of daily living' facilities.

b. Physiotherapists, who will require facilities for group and individual assessment and treatment.

c. Other groups of staff who will be conducting individual and group therapeutic activities.

Dining, sanitary and domestic facilities appropriate to the size and function of the day hospital will also be required.

***In preparation.**

3.9 Day hospitals which are not part of an in-patient unit will require some clean utility and treatment room facilities. These are not required where the day hospital is part of an in-patient unit, as treatment room facilities will be available locally.

Wards

3.10 Two types of ward, whatever the size, can be defined:

a. A **'bed-annex ward'**, which is functionally integrated with a day hospital. In this case, the ward functions primarily as a bed annex to its associated day hospital, but will need to include a quiet room (4.36) for a small number of patients who require more intensive care and are not yet fit to use the day hospital.

b. A **'self-contained ward'**, where all or most of the patients do not use the day hospital facility because of the severity of their illnesses. Hence, living, dining, recreation, and therapy areas will need to be incorporated into the ward design. It is not anticipated that more than one self-contained ward would be required.

3.11 In both cases, there should be a staff base, located to ensure adequate observation of all circulation areas and to be near the bedroom area. It should be adjacent to single bedrooms, be simply equipped for use by night staff and be so designed and furnished as to be a sitting place for patients and staff. (See 4.30)

Electro-convulsive therapy (ECT)

3.12 ECT remains an effective form of treatment for certain conditions although its volume is diminishing. A patient is brought to the suite, prepared for a general anaesthetic, anaesthetised and given a muscle relaxant prior to delivery of the therapy. Recovery is in two stages, first recumbent, then sitting; thereafter, the patient can return to general activity. The suite is used on a sessional basis for only a few hours a week.

3.13 Each health authority will need to assess the volume of this therapy for which it will need to provide. Not more than one suite will normally be required by a district, and its location is a matter for local decision. It may be sited either in the adult mental illness unit or in a day hospital elsewhere. When it is part of a mental illness unit with in-patient accommodation, its treatment room can be used for minor treatments and examinations at other times. The design should be such that other spaces in the suite can be used for other purposes as far as possible, eg a trolley bay should be incorporated, thus freeing the recovery area for other purposes.

3.14 Only one size of suite is described in this Note. It is important to ensure that the inclusion of the suite is justified by the volume of therapy needed and not by the size of the unit with which it is associated.

3.15 For many patients, the prospect of receiving ECT, even though given under a general anaesthetic, is at least as daunting as having a minor operation. It is therefore essential that the facilities provided, particularly in the waiting and recovery spaces, should be as attractive and relaxing as possible and should accommodate the nurse and anyone with the patient.

3.16 The paramount concern of the medical and nursing staff is that the procedure should be carried out under conditions of the utmost safety, both at the time of administration and during the recovery period. Guidance on good practice including effects on design is contained in the report published by the Royal College of Psychiatrists in 1981 entitled 'Electro-convulsion Treatment in Great Britain 1980', and advice should be sought from the consultant with overall responsibility.

Out-patients accommodation

3.17 It is for a health authority to decide whether the out-patients accommodation for mentally ill people should be a part of the main OPD of the DGH or elsewhere. This Note describes out-patient facilities within the mental illness accommodation, as it appears on balance that this approach best meets the needs of mentally ill people for the ambience of a smaller, specifically organised, service.

3.18 Paragraphs 4.46 and 4.47 describe the functional spaces, and two sizes are considered in Chapter 9. It is possible, and may be desirable, to have accommodation at more than one location within the district.

Administration

3.19 An administrative centre, the management base for the district's services for mentally ill people, is required. A clear decision will need to be taken on its size and location (see para 4.48), which will be influenced by the type of service the district has decided to provide. There are two basic options:

a. associated with the mental illness unit

b. associated with one of the other mental health facilities. (See para 2.5.)

3.20 The accommodation will need to be a focus for the disciplines delivering this service, which include medical, nursing, community psychiatric nursing, psychology, remedial therapies, social work and their associated secretarial and support services. Paragraph 4.48 describes the functional spaces needed and two sizes are considered in Chapter 9.

4 Adult People with Acute Mental Illness – Specific Functional and Design Requirements

Introduction

4.1 Chapters 1–3 describe how a district will need to define the service it wishes to provide and to identify the range of options possible. They also indicate both an incremental approach to the provision of accommodation, and the possibility of integrating functional elements. Hence, this guidance seeks to be responsive to a range of planning requirements and at the same time to encourage economy. Chapter 9 indicates the areas used for costing.

Day hospital

4.2 A day hospital will require the functional spaces described in the following paragraphs. It is for project teams to decide, on the sizes of a day hospital or hospitals. In small day hospitals there can be sharing of some activity and office spaces. However the dining and sitting spaces should form the focal point for day activities and should be sited together so that they can be used for other functions outside of more formal programmes.

Dining room

4.3 It is recommended that the dining area should be sized for one sitting only, to allow for the use of this space for other purposes, eg recreation and large group meetings. A dining space which is too small will inhibit this. Careful consideration needs to be given to the design requirements as the dining room may be required to serve in-patients, day patients, or both. The arrangements will depend upon the location of the day hospital, eg they are likely to be different at the DGH from those at a community location.

(1) *At the DGH*

a. It is assumed that there will be central catering facilities and a central washing-up service, and that patients will receive food served by the staff or patients from an insulated bulk trolley. In some units, a plated meal or tray service may provide an acceptable alternative.

b. A *pantry* is required for the preparation of beverages to be consumed in the dining room, sitting area, forum, or elsewhere. Ample storage is required for dry goods and for limited crockery and cutlery. A refrigerator will be required for milk and butter storage and any other perishable food required for snacks. Facilities for washing up beverage and snack crockery and for handwashing will also be required. Space should be sufficient for two people to work at the same time and a serving hatch to the dining area may be an advantage.

c. *Trolley parking space* will be required for catering and beverage trolleys.

(2) *Community locations*

a. It is essential at a very early stage to determine how main meals will be supplied, as the choice of service will have a profound effect upon the space required. The options include:
   i. Insulated containers supplied from a hospital or meals on wheels kitchen.
   ii. Cook/freeze or cook/chill meals supplied in bulk and cooked in micro-wave ovens or heated trolleys.
   iii. Cooking on the premises.

b. For *supply by a hospital*, the provision will be similar to that described for the DGH.

c. For *cook/freeze or cook/chill provision*, more space will be required to accommodate the necessary freezers, ovens, and trolleys.

d. A *self-contained kitchen* is the most expensive option in both capital and running costs and has not been considered in detail in this Note. (See HBN 10, Catering.) It could also be used for therapeutic programmes for some patients (eg self catering programmes). A pantry should not normally be required.

Sitting room

4.4 This should be sited adjacent to the dining room so that the two can be combined for community meetings and social activities such as dancing and films. The room should be attractively decorated and furnished in a homely style. Patients will relax here between their programmed treatment sessions, after meals when taking tea or coffee, and it will be used by in-patients in the evenings and at weekends.

Forum (informal sitting)

4.5 This is a sitting space contiguous with, but not part of, the circulation route, if possible, adjacent to the staff office so that it can also be used as an informal waiting space. Its prime use is as an informal meeting place for patients and staff. There is an advantage in planning this place adjacent to the dining room and the pantry/kitchen.

Quiet room

4.6 A small room where patients may relax in peace and quiet is required. It should have a variety of comfortable chairs and may also be used for group therapy. This room will also be used by in-patients in the evenings and at weekends.

Therapy areas

4.7 Depending on the size of the day hospital one or more rooms for *group therapy* are required, to be used on a programmed basis. Each room should accommodate up to 10–12 people sitting in a circle, and to prevent duplication

of spaces the room(s) should be used for activities such as family therapy, counselling, interview etc when not being used for group therapy.

4.8 The *occupational therapy spaces* should be designed to ensure the effective and flexible use of staff and be capable of multi-use. They need to provide a variety of activities which require a range of social interaction, intellectual ability and manipulative skills. Heavy, fixed, specialised equipment will not be required. The spaces should include:

a. A *clean/quiet activity area*, with associated stores where dressmaking, educational activities, and clerical work may be undertaken, with sufficient space for table-top activities. Tables and chairs should be easy to stack. A sink and drainer is required and a display panel should be provided on at least one wall. Task lighting should be provided. In large units these activities may be undertaken in separate but similar rooms, when one should be designated for 'quieter'activites.

b. A dirty/noisy activity area, with an associated storage space large enough to cope with patients' 'work in hand', for activities like woodwork, printing, art, and pottery (when it will be necessary to install a mobile kiln, which should be in a separate space). Substantial but moveable benches will be required and an adequate number of safe socket outlets. Hand power-tools would normally be used, which should be locked away when not in use. A large sink and drainer is required. This space is also likely to be used as the base for remedial gardening and should therefore have direct access to the external garden areas, or internal courtyards, where a greenhouse may be provided either free standing or as an attached conservatory. Flooring in this area should be hardwearing and non-slip. Consideration should be given to the delivery and storage of timber and other materials. In large units, some of these activities might be undertaken in separate but similar rooms.

c. An *'Activities of Daily Living' (ADL) kitchen area*, which should be a separate space. The size and ambience should be that of a 'domestic' kitchen capable of accommodating a small group with equipment similar to that likely to be in the patients' homes. Both electric and gas appliances should be available, but the cookers should not be in corners. All the kitchen cupboards and the refrigerator should be lockable. There should be space for patients to work with the staff and for a proportion of them to sit down and eat.

d. A *beauty/hairdressing space*, where facial care, manicure and hairdressing can be undertaken by either a hairdresser (in larger units), a member of staff or by patients themselves. Careful programming of use will be necessary in larger units.

e. An *occupational therapy office*, which should be central to the range of occupational therapy spaces and preferably adjacent to the clean and dirty activity areas for ease of observation. In smaller day hospitals, this office should be combined with the physiotherapy office (4.9b).

4.9 The *physiotherapy spaces* should include the following functional areas (which will normally be separate rooms). Sophisticated assessment and treatment will not usually be required; when needed they should be obtained from the main district physiotherapy service.

a. *Activity/recreation.* This should should be large enough for group activities such as vigorous physical exertion, music and movement, and relaxation classes. The room should be large enough for mats to be laid on the floor, and to enable gait problems to be assessed. In large day hospitals more than one area may be required.

b. An *office*, which should be adjacent to and overlook the functional areas. This will also need to be used for individual patient assessment, and should be large enough to accommodate a wide adjustable couch. In smaller day hospitals, this office should be combined with the occupational therapy office (4.8e).

c. *Storage* for mats and other movable equipment.

Some fixed equipment will be needed, for example, a set of wall bars, a multi-gymnasium, and parallel walking bars.

4.10 A *patients' utility room* and a *treatment/clean utility room* will be required when the day hospital is not associated with a ward (4.32 and 4.33).

Other accommodation

4.11 The *staff office* is the focal administration area which should be the reception point to the day hospital and hold the current records of patients. It should be accessible to all staff if possible, be near the entrance and to the patients' forum, and could be the nursing staff base.

4.12 A *staff cloakroom*, adjacent to the staff office, is required, where staff may hang coats and keep valuables safely. A WC with wash basin is required in this area.

4.13 *Patients' WCs* should be distributed throughout the day hospital. They should be sited near the entrance, the dining and sitting areas, and convenient to other activity areas. At least one should be suitable for disabled persons and adjoin the physiotherapy area.

4.14 A *bathroom or shower* may be required if the day hospital is not integrated with a bed annex ward.

4.15 *Storage spaces*, including a bay or room, close to the reception area in which day patients can safely leave their outdoor clothes and personal possessions, will be required. A range of other storage spaces will be required for equipment and materials.

4.16 A *disposal room* will be required near the clean and dirty activity areas. If the room is to be shared by other parts of the mental illness unit, it should also be located conveniently for those parts. (See 4.35 and HBN 40).

4.17 A *cleaners' room* will be required for the storage of cleaning equipment and emptying buckets. A cleaning trolley and a working supply of cleaning materials will be stored here. The room should be lockable. If the room is to be shared by other parts of the mental illness unit, it should be located conveniently for those other parts.

Wards

4.18 As indicated in paragraph 3.10, two types of ward are defined—those functionally integrated with a day hospital, 'bed-annex wards' and 'self-contained wards'.

a. *Bed-annex wards* provide sleeping accommodation in single and multi-bedrooms, as required. Patients will retain personal belongings in their bed areas. Bedrooms will be grouped with WCs, bathrooms, utility rooms, staff bases etc, with perhaps a small quiet room (which may also be used for dining), for a few patients who are too ill to use the day hospital facilities.

b. *Self-contained wards*, which will require dining, sitting, and therapy spaces, together with a pantry, for most of the patients.

Bedrooms

4.19 The majority of mentally ill people do not need bedside care but require sleeping accommodation comparable to a small domestic bedroom. Standard bedhead units, piped oxygen and suction are not required.

4.20 Patients will require easy access to clothing and other personal possessions. Personal storage facilities with appropriate security should be provided within each bedroom, with a small store elsewhere for the personal belongings of patients who temporarily cannot be permitted to have access to them.

4.21 Single and multi-bedrooms should be provided. This allows male and female patients to be cared for in the same ward whilst allowing adequate segregation and privacy. Mothers admitted with their babies will require a single room, which can be observed easily by the nursing staff. It is not envisaged that children over about one year old will be resident other than in very exceptional circumstances. The ratio of single to multi-bedrooms is a matter for local decision, based on the philosophy of care adopted, bearing in mind the capital, and possibly revenue implications of a large number of single bedrooms. This is a complex issue, as it may be that single bedrooms are capable of more flexible use.

4.22 The minimum bedspace for a patient is 2.5 m × 2.9 m. This will provide personal space for the patient, and is such that care and treatment can be given in the space when required. Each bedspace will require a divan bed, not so low as to make bedmaking difficult; chairs; chest of drawers; and a wardrobe with spaces for hanging clothing and for storage.

4.23 *Single bedrooms* should be suitable for a variety of users, be furnished and equipped in a similar manner to the bed spaces in the multi-bedrooms, and contain a wash-hand basin. At least one single room should have a lockable communicating door to a domestic bathroom so that a patient needing isolation, a mother with her baby, or a person requiring social retraining can use the bathroom en suite. The bathroom should also have a door to the corridor so that when not used en suite it can be used by other patients.

4.24 A *special room* solely for the temporary care of a severely disturbed patient may be required, but the professional team should be asked whether more than one is needed per unit. It should be close to the staff base and have:

a. a robust door which can be opened only by the staff from the outside and which opens outwards;

b. a vision panel of toughened glazing suitable for staff observation sited either in the door, or in a wall, which can be screened from the outside when privacy is required, and which gives as much all round vision of the room as possible;

c. windows should have safety glass and restricted opening;

d. three light fittings which should all be ceiling mounted, flush and unbreakable, with –

   i. the main light, controlled by a switch outside the room,
   ii. a separate night light to give a pool of light by the door, with a switch outside the room,
   iii. an overbed light. The local bed-head switch should be capable of being isolated by means of an over-ride switch mounted outside the room (see para 8.62);

e. heating which cannot be tampered with, controlled from outside the room;

f. sound containment to a reasonable level.

The need for a suitably equipped en suite WC will also need to be decided by the project team.

4.25 *Multi-bedrooms* should normally contain four or five beds each, of the divan type. Each patient should have a clearly identifiable bedspace as described in paragraph 4.22. Privacy for patients can be achieved by a suitable arrangement of furniture, partitions, and curtains. There may be a need for one or more two-bedded rooms one of which should be equipped with Kings Fund beds to cater for the occasional patients who need physical nursing care. The size and number of multi-bedrooms in a ward is a matter for local decision.

Sanitary facilities

4.26 The recommended scale of provison of WCs is one per five patients. Additional WCs should be included in bathrooms and shower rooms. Each WC should have a wash-hand basin. It will be a matter for local decision whether WCs are separately designated for men or women, but the labels on the doors should be interchangeable according to the ratio of male to female patients.

4.27 *Bath/shower rooms* should be provided on a scale of one to six patients. The proportion of bathrooms to shower rooms is a matter for local decision. One bathroom should be an assisted bathroom, as should one shower room. (See HBN 40, 'Common Activity Spaces', Volume 1.) All bathrooms and shower rooms should contain a WC and wash-hand basin. Hair washing may be undertaken in the assisted bathroom or assisted shower room by the use of a hand spray sited to serve the basin and the bath. Hair driers should be used in the patient's bed area.

4.28 The *doors* to the WC, bath and shower rooms should have a 'vacant/engaged' indicator. All the locking devices must have an external release and the doors should be able to open outwards in an emergency.

Staff accommodation

4.29 The *staff office* is the administrative base of the ward from which staff can observe patients' movements and also where patients may locate staff. It should be accessible to staff of all disciplines and if possible should be near the single bedrooms. It may also be the reception point to the ward and will hold current records of patients. Staff hand-over will take place here. In the bed annex ward, it incorporates what was known as the 'Sister's/Charge Nurse's Office' (4.11). Temporary secure storage for patients' valuables will be needed.

4.30 The *staff base* is the space where patients and staff can pause to sit and have a conversation uninhibited by the sense of enclosure which a room provides. It should be adjacent to the staff office and be furnished with easy chairs and a low table. The lighting should provide identification of the space and be so arranged that staff can read at night. Staff must be able to observe the doors to single bedrooms and the corridor to the other bedrooms. It is not an administrative area but a place from which staff can observe patients' movements and patients can locate staff, especially at night. The indicator lights for the call system and Controlled Drugs cupboard must be visible. A transfer of staff/staff calls to an adjacent area in the mental illness unit may be needed. A telephone kiosk with a coin operated telephone, capable of being used by a disabled person, should be located nearby.

4.31 The *staff cloakroom* should be adjacent to the staff office and include a WC with wash basin for the use of all staff. For the bed annex ward, consideration should be given to the cloakroom and WC serving both ward and day hospital (day activity spaces).

Other spaces

4.32 A *patients' utility room,* primarily for patients to launder small items of personal clothing, should be provided. Washing, drying and ironing equipment will be needed. The relative merits of commercial, as against domestic, equipment will need to be considered.

4.33 A *treatment/clean utility room* will be required. It should be near the staff office and be lockable. Secure storage of drugs, including Controlled Drugs, medicines, lotions and a small working stock of clean and sterile supplies is necessary. Space will be needed to assemble and prepare equipment for clinical procedures and to park the medicine trolley. Mobile resuscitation equipment, including oxygen and suction, may be stored here. In this room patients will receive injections, medications and first aid. Cupboards also should be lockable, and the window so designed that the function and contents of the room are not obvious from the outside. This room can also be used for medical examinations and should have space for an examination couch.

4.34 A *dirty utility room* will be required, although the use of such items as non-disposable bed-pans, urinals, washing bowls, etc will be limited. Urine testing facilities should be available. It will be a temporary store for materials requiring reprocessing (eg SDU items). In the case of bed annex wards, this space can be shared with the associated day hospital.

4.35 A *disposal room* (see HBN 40, 'Common Activity Spaces', Volume 1) for the temporary storage of bagged refuse for disposal, dirty and fouled linen, will be required. Adequate ventilation is necessary.

4.36 A *quiet room* is required in all wards. In a bed annex ward, most patients will use the adjacent day hospital most of the time during the day, evenings and at weekends. However, one or two patients may be kept back in the bed-annex ward and may need to use this quiet room during the day. Meals may need to be served in this room. In a self-contained ward, this room may also be used for group therapy during the day and informally by in-patients during the evenings and weekends as an alternative to a sitting area, and a TV aerial outlet is required.

4.37 *Storage spaces* are required, including:

a. *Equipment store,* which should be capable of holding nursing equipment and alternative furniture and equipment for the special room and the mother and baby rooms.

b. *Bulk store,* to hold disposable goods, Christmas decorations, etc.

c. *Patients' store,* to hold large suitcases, personal effects and some clothing provided for emergency use. Clothing and personal effects of a few patients will require storage away from their bedside.

d. *Linen store,* to hold sufficient linen in the light of the supply and laundry service as determined by the whole hospital policy. If there is a top-up system, shelves will be needed. If the trolley exchange system is used, space for the trolleys is required. The number of trolleys for which space is needed is determined by the frequency of exchange.

Additional rooms for a 'self-contained' ward

4.38 A *sitting room,* which should be comfortably furnished and domestic in character is required. A television aerial outlet is required, as is storage. The sitting room should be adjacent to the dining room.

4.39 The *dining room* should be of a size to enable meals to be taken at one sitting. It should be adjacent to the sitting room and pantry.

4.40 The *pantry* should be as described in paragraph 4.3(1)b., scaled to cater for the number of patients in the ward.

4.41 The requirement for *therapy areas* including office accommodation in self-contained wards will need to be determined by health authorities and provided accordingly, bearing in mind the potential of the quiet room, and the need for occupational and recreational therapies. The Schedule of Areas included in this building note suggest the maximum provision thought to be necessary.

4.42 A *consulting/interview* room should be near the ward entrance. Small wards (ie with 10 or 15 beds) could share this room. There should be complete privacy of conversation in the office during interviews and when speaking on the telephone.

ECT Out-patients and Administration Suites

4.43 Authorities will need to decide the need for, and size of, the out-patients and administration suites which are necessary for their service. The following paragraphs describe an ECT suite; an out-patients suite, which may be small or large, solely for patients with mental illness; and an administration suite, which may also be small or large.

Electro-convulsive Therapy (ECT) Suite

4.44 There is wide variation in the volume of ECT undertaken; but treatment is on a sessional basis, and the accommodation is under-utilised, so that consideration needs to be given to the use of the rooms for other purposes. The suite may be sited in association with the in-patient accommodation, the day hospital, or the out-patient department.

4.45 The rooms required comprise:

a. A *reception/waiting room*, which should be large enough to accommodate up to 10 people. It should be pleasing and restful in decor and furnishing, with easy chairs for patients and anyone with them. A small desk and chair are required for staff at a reception point and for the necessary administrative procedures. The ante-room and treatment rooms should not be visible, neither should sounds from them be audible. When not in use for ECT this room could be used for group activities and/or as sub waiting space for out-patients or day hospital reception.

b. An *ante-room*, in which the patient removes or loosens clothing, takes off shoes and gets on to a trolley bed. The trolley should have a low-level tray for the patient's personal effects. The entrance should be out of sight of waiting patients and requires double swing doors for the movement of trolleys into it from the corridor. Double swing doors are also needed from the ante-room into the treatment room. Subdued lighting will reduce the clinical atmosphere, but must be colour-corrected and capable of increased intensity when required. Sound transmission from the treatment room must be prevented.

c. An *assisted WC* will be required adjacent to the ante-room for the use of patients and their relatives. (See HBN 40, 'Common Activity Spaces', Volume 1.)

d. The *treatment room* is a clinical activity area and should be designed and equipped as such though the decor should be chosen with appreciation of the patient's apprehension. Obscure glass in the windows is preferable to curtains. Colour-corrected lighting, of high and low intensity, is necessary. A ceiling-mounted examination light is required. Sufficient space is needed for the manoeuvring of the trolley bed from the ante-room and subsequently into the recovery room. Adequate space is needed for the anaesthetic apparatus and the anaesthetist; for the ECT equipment and the doctor using it; and at least two nursing staff. A wash basin with elbow action taps should be provided. Medical gases will be obtained from the anaesthetic machine, but may be piped if the treatment room is adjacent to other accommodation with these services. Mechanical extract ventilation should be provided. A waste anaesthetic gas scavenging system however will not be necessary. The resuscitation equipment and a cardiac arrest trolley will be held here.

e. A small *dirty utility* room will be required.

f. A *recovery room (recumbent patients)*, to which the patient is wheeled as soon as his reflexes return. Space for a maximum of five trolleys beds will be necessary. Cubicle curtains or mobile screens are needed for privacy. People outside should not be able to look into the recovery room and blinds or curtains are required to prevent glare. The environment should be restful but the wall finish should not distort the patients' colour and colour corrected lighting is recommended. Between ECT sessions when cleared of trolleys this large room could be used for activity and relaxation classes.

g. A *store* should be provided which will hold some of the trolleys between sessions, the remaining trolleys being stored in the ante-room, freeing the recovery room for other purposes when not being used for ECT.

h. A *recovery room (ambulant patients)*, the doors to which should be wide enough for a patient to enter with assistance. The environment should be domestic in character with a soft floor covering. About six easy chairs with high backs are required. The lighting should be domestic in character and there should be a pleasant outlook. When not required for ECT recovery, this space could be utilised for group therapy, seminars, etc.

Out-patients suite

4.46 It is for local decision whether out-patients should be seen in the main out-patient department or whether a separate suite should be provided in the mental illness unit and/or elsewhere. If a separate suite is to be provided, consideration should be given to sharing some accommodation with the day hospital, eg reception and waiting spaces.

4.47 The guidance here is for an out-patients suite in the mental illness unit. It should be adequate for the planned workload of psychiatrists, clinical psychologists and other staff who will see patients. All rooms should be furnished and equipped in domestic style, and clinical equipment, eg examination couches should be discreetly positioned. The accommodation required will be:

a. *Waiting space* for the anticipated number of patients and escorts. A staff base, eg a desk and chair, may be required.

b. *Consulting rooms* for psychiatrists and clinical psychologists, some or all of which will be equipped with physical examination facilities. The number necessary should be determined locally.

c. *Consulting (Interview) room(s)* for use by a number of disciplines, eg community psychiatric nurses and social workers. The number necessary should be determined locally. One or more of these may need to be designed as viewing rooms into adjacent consulting room(s).

d. *A treatment/clean utility room* for patients requiring injections and treatment such as dressings. It should not be necessary to provide this space if the out-patients suite is related to a ward or a day hospital which includes this facility.

e. A small *dirty utility room* for disposal of liquid and solid waste, with facilities for testing urine. Where feasible this could be shared with a ward or day hospital.

f. Two *WCs*; one *assisted* for patients, in which specimens for urine analysis can be obtained, and one *staff WC*.

g. A small *general purpose lockable store*.

Administration suite

4.48 The district services for mentally ill people require an administrative centre (3.19). Most usually, it will be located with the mental illness unit, when it should be near the day hospital and the out-patients suite, if this is provided. The accommodation required will be:

a. *Offices** As necessary, bearing in mind provision elsewhere for consultants and clinical psychologists, the senior registrar, the senior nurse, and the administrator. Offices, which may be shared, may be needed for other medical staff, community psychiatric nursing staff, social workers, secretarial staff and voluntary workers. These should be provided and located in relation to local needs.

b. A *small conference/seminar room,** if required.

c. A *small waiting area* for use by staff or visitors to serve all offices is required. It should be conveniently placed and under supervision.

d. A *staff WC** to serve all offices, and a *WC for patients.**

e. A small *store* will be needed.

***For more detailed information about these spaces refer to the 'Common Activity Spaces Building Note' (HBN 40), Volume 1.**

5 Elderly People with Acute Mental Illness – General Functional and Design Requirements

Introduction

5.1 This chapter provides design guidance based on the service objectives outlined in Chapter 2. Information on a range of topics and environmental matters which should be taken into account when designing accommodation is given in Chapter 7.

General Considerations

5.2 As indicated in Chapters 1 and 2, each health authority will need to decide on the pattern of services it is to provide for elderly people with mental illness. The policies advocated by the Department are contained in Appendix 1. It is assumed in this HBN that the service will cater for elderly people with both functional mental illness and the dementias, from an age to be determined by the health authority in consultation with the multi-disciplinary care team. The age selected will determine the relative sizes of provision for the elderly compared with that for adults. The accommodation described below is for assessment and short term treatment only, supplementing the community based facilities. It should comprise:

a. day hospital;

b. assessment and short-term treatment ward;

c. out-patients suite;

d. administration suite for the district's service to the elderly mentally ill (if it is decided that the DGH is the appropriate location: alternatively, it may be decided that the administrative base of the service should be elsewhere, eg at one of the locations in the community).

5.3 Accommodation will also be needed for longer term and continuing residential care of some people. This is not described in this HBN as it should be sited at appropriate locations within the district, together with locally-based day hospitals.

5.4 There should be a close relationship with both the general medical practitioner service and the district's service to the elderly. Consultants in geriatric medicine may be involved in both the assessment and continuing care of these patients. Access to the services of remedial and speech therapists, dentists, opticians, chiropodists and hearing aid technicians will also be required.

Assessment and short-term treatment unit

5.5 This unit should be at the DGH and located close to the Department of Geriatric Medicine with ready access to the diagnostic services of the hospital. It may often be appropriate to associate it with the adult mental illness unit. It must be on the periphery of the complex, on the ground floor, and have its own surrounding usable space. Ideally, the doors to the accommodation should not face, or be near, a major traffic route either outside or inside the hospital complex. The grounds adjacent to the buildings should be inviting to encourage patients to go out of doors into courtyards or gardens. These can be made safe by the discreet use of walls and fences, the latter disguised by trees, shrubs or replaced by a thick hedge. The location should ensure:

a. ease of access for people with limited mobility arriving by ambulance or car and for visitors, etc;

b. good communications between the day hospital and the ward, the other main hospital services and the adult mental illness unit, where this is on the DGH site;

c. in-patients can remain in touch with the world outside the ward;

d. patients can make use of the hospital grounds for exercise and leisure;

e. rapid evacuation in the event of fire.

5.6 Many elderly people with mental illness can be assessed and treated at home, with the support of the day hospital. However, some patients will need admission for detailed evaluation of their physical and mental states and for short-term treatment. One ward of up to 20 beds should normally suffice.

5.7 The ward should be functionally integrated with a day hospital which many in-patients will use during the day and in the evenings. The day hospital should also have places for day patients requiring assessment, and treatment and care without the need for admission. The size of this day hospital will be for the health authority to decide but it should normally have 20–40 places.

5.8 It is for the health authority to decide whether the out-patients service for elderly mentally ill people should be associated with the main out-patient department of the DGH or be a part of the service for mentally ill people. If separate accommodation for mentally ill people is decided upon, the out-patient service for the elderly should normally utilise the accommodation provided for mentally ill adults even if minor modifications to the design are needed. (See Chapter 6.)

5.9 The accommodation for administration will be similar to that required for adult mentally ill people.

6 Elderly People with Acute Mental Illness – Specific Functional and Design Requirements

Introduction

6.1 Chapters 1–3 have described the range of options open to planners in determining the functional content of the assessment and short-term treatment unit for elderly people with mental illness. The district service for elderly people should consist of a range of services in the community supported by the unit at the DGH.

6.2 The following paragraphs set out to aid planners in assembling their requirements for the unit at the DGH, which will comprise a day hospital, short-term assessment and treatment ward, out-patients suite (if it is decided not to use either the main OPD or the adult mental illness suite should this be provided) and administration suite (if it is decided this is the appropriate location). This guidance seeks to be responsive to a range of planning requirements and at the same time to encourage economy. For elderly people with mental illness, a self-contained ward is recommended planned to be functionally integrated with a day hospital. This will ensure that in-patients will have access to all disciplines and to the spaces in which these disciplines need to work.

6.3 Most of the functional spaces will be very similar to, if not identical with, the comparable spaces for adults with mental illness, described in Chapter 4. Hence, this chapter will merely draw attention to the differences needed to meet the special accommodation needs of older people. In brief, these arise from the increased frailty which may be associated with ageing.

Day hospital

6.4 Paragraphs 4.2–4.17 describe the functional spaces required. The following considerations will need to be borne in mind for the elderly –

a. Many patients may be frail, and some will have physical disabilities and need to use walking aids, or wheelchairs.

b. The activities to be undertaken in the day hospital will need to be accurately identified as they will differ in a number of respects from those needed for adult patients (eg the volume of physiotherapy required). Paragraphs 4.2 *et seq* should be used as a guide to the spaces to be provided.

c. An *assisted bathroom* is required for assessment, some treatments and care (see HBN 40, 'Common Activity', Volume 1), unless this is readily and freely available in the adjacent ward.

d. *Patients' WCs* (paragraph 4.13) should provide for the needs of the elderly, be suitable for disabled people and be clearly labelled. No patient should have to walk more than 12 m from any space to a WC, and one WC should be integrated with the physiotherapy areas, or be immediately adjacent.

e. In small day hospitals, the *sitting and dining spaces* can be combined in a single space. The quiet room should be retained as a separate space.

Wards

6.5 The self-contained ward is envisaged as appropriate for the assessment and short-term treatment of elderly people with mental illness. (See paragraphs 3.10, 4.18b and 4.19–4.42.) The following considerations should be borne in mind for the elderly –

a. The proportions of single and double bedrooms (eg for married couples) to multi-bedrooms may need to be even higher than that for adults with mental illness (4.21).

b. Design should reflect the likelihood of physical disabilities and the frailty of the elderly, requiring the use of walking aids.

c. In *bedrooms*, there may be need for a greater proportion of King's Fund type beds. There is advantage in having a WC either adjacent to, or en-suite with, each multi-bedroom.

d. *WCs* should be designed so that patients can use the wash hand basin while seated. All WCs will need to be 'assisted'. (See HBN 40, 'Common Activity Spaces', Volume 1.) They should be so arranged that no patient has to walk more than 12 m from bed or day space to a WC. This is particularly important when upgrading old buildings.

e. *Bathrooms and showers* should be related to bed areas, and be 'assisted', as most patients, though ambulant, will need help. One bathroom should be a domestic bathroom, primarily to meet the need for assessment of patients. An assisted bathroom is included in the integrated day hospital. (See HBN 40, 'Common Activity Spaces', Volume 1.)

f. The *therapy areas* indicated in paragraph 4.41 should not be required, given the functional integration with a day hospital, though the *quiet, dining and sitting rooms* (4.36, 4.38 and 4.39) should be included. The dining room is to be retained in the ward even though some patients will dine in the day hospital, because some additional social space is required.

g. An *office* for medical use may be needed. If so this will reduce the number provided in the day hospital and elsewhere.

Electro-Convulsive Therapy (ECT)

6.6 No ECT suite is described. The ECT suite in the adult mental illness unit should be used for any patient needing this treatment.

Out-patients Suite

6.7 See paragraph 5.8. If a separate suite is decided upon, the requirements are as in paragraphs 4.46–4.47, but the likelihood of physical disability and the need to ensure ease of access to WCs should be borne in mind.

Administration suite

6.8 Should a separate suite be decided upon, the requirements will be as described in paragraph 4.48.

7 Other General Functional and Design Considerations

Introduction

7.1 This Chapter contains guidance concerning aspects of function and design which are common to health buildings generally and which will need to be borne in mind when designing new buildings or upgrading existing premises. Certain aspects which have particular relevence to accommodation for mentally ill people are discussed in greater detail.

Works Guidance Index

7.2 This HBN provides guidance that is current at the time of publication. Specific issues such as storage of medical gases, and practical arrangements for dealing with Legionnaires Disease, fire, energy conservation etc are covered by other published guidance, which must also be taken into account. Some aspects of the guidance in this HBN may from time to time be amended or qualified and it is necessary for project teams to check with the current edition of the Works Guidance Index. The Index is published by the Department in May each year and updated in September and January. It should be noted that as the Index published in May covers the guidance current in the previous year it carries the previous year's date, as do the two updates.

Economy

7.3 The planning of hospital buildings requires design solutions which not only satisfy functional requirements but also ensure maximum economy in respect of both capital and running costs. Due weight must therefore be given to the questions of space provision, maintenance (including cleaning), energy consumption and staffing requirements. Planning should ensure that spaces are used as intensively as possible and are not unnecessarily duplicated.

Upgrading or adaptation of existing buildings

7.4 The standards set out in this guidance essentially apply to the provision of accommodation by new building and it is not intended that they should be applied retrospectively to existing stock. However, the principles are equally valid and should be applied, so far as is reasonably practicable, when existing accommodation is being upgraded or new accommodation is being constructed within an existing building which may previously have been used for other purposes.

7.5 The cost of upgrading work should conform to the guidelines indicated in the Department's WKO letter (81)4 issued on 24 July 1981 (in Wales, AWO (81)8). Those guidelines take into consideration the estimated life of the existing building and the difference in cost between upgrading a building and new building.

7.6 Before any decision is made to carry out an upgrading project, consideration must be given to the long-term strategy for the service, the space required for the new service, and the size of the existing building. Regard must also be paid to the orientation and aspect of the building and the adequacy and location of all necessary services. If there emerges a *prima facie* case for upgrading, a thorough analysis of all functional and physical conditions of the existing building should be undertaken.

7.7 When comparing the cost of upgrading or adapting an existing building to that of a new building, in addition to the building cost, due allowance must be made for the cost of relocating people, demolition and salvage costs, disruption of services in a phased project, and the temporary effects on running costs of any impaired functioning of areas affected by upgrading.

7.8 The check of physical and other aspects of existing buildings should include:

a. availability of space for alterations and additions;

b. type of construction;

c. insulation;

d. age of the buildings, condition of fabric, eg external and internal walls, floors, doors and windows, which may be determined by a condition survey;

e. life expectancy and adequacy of engineering services, ease of access and facility for installation of new wiring and pipework, if required;

f. the height of ceilings (high ceilings do not necessarily call for the installation of false ceilings which are costly and often impair natural ventilation);

g. changes of floor levels to obviate hazards to disabled people;

h. fire safety (see paragraph 7.17); and

i. physical constraints to adaptation such as load-bearing walls and columns.

7.9 Having decided that existing premises are suitable for upgrading or conversion, the main requirements will be to assess how best the accommodation can be adapted so as to facilitate the practice of modern care. The main environmental factors which should be considered are the same as for new building – see paragraphs 7.41–7.59.

7.10 Upgradings must conform to current fire safety and other statutory regulations. It is very difficult to estimate the fire resistance of floors, walls and doors of existing buildings.

7.11 This summary of the main aspects of upgrading is general in character and it is recognised that each upgrading project will present its own individual problems. In many

instances compromises may have to be made between building note standards and what is possible to achieve. Upgradings should be functionally sound – not merely cosmetic – and appropriate for the projected needs of patients and staff for a number of years to come.

Statutory and other requirements

7.12 It is Government policy that health buildings should comply with the technical requirements of all relevant statutes and regulations, though at the time of writing not all the procedural requirements of such legislation are enforceable against health authorities as Crown bodies. Attention is drawn to HC(86)14 (in Wales, WHC(87)7), concerning Food Hygiene and Pest Control in the Health Service, and HC(87)3 (in Wales, WHC (87)8), concerning Health and Safety at Work: Crown Immunity. These give the practical implications on the change in the law on Crown Immunity. Health buildings should also comply with all relevant codes of practice and standards (including Health Service Fire Standards). This guidance takes account as far as possible of all statutory and all other requirements currently in force but, nevertheless, health authorities are reminded of their responsibility for ensuring compliance with statutes, regulations, codes and standards.

Smoking

7.13 Health Circular HC(85)22 dated May 1985 (WHC(85)31 in Wales) provides guidance about smoking on health premises. While recognising that the responsibility for determining local policies rests with the health authority, the circular recommends that smoking should be restricted as far as possible and, where it is permitted, confined to specially designated areas which are clearly signposted. In such areas ventilation should be sufficient to prevent discomfort to non-smokers and the spread of odours to other areas of the premises.

Fire precautions

7.14 It is essential that project teams familiarise themselves with the guidance contained in the FIRECODE suite of documents which contain the Department's policy and technical guidance on fire precautions in hospitals and other NHS premises. In particular, the need for structural fire precautions and means of escape from the whole accommodation must be taken into account at the earliest possible planning stage, bearing in mind that some patients are prone to wandering away. The key document for these aspects in hospitals is FIRECODE: 'Fire Precautions in new hospitals', HTM 81.

7.15 In addition, basic policy, principles and key management guidance are contained in 'FIRECODE: Policy and Principles'. Other FIRECODE documents include the Health Technical Memoranda '80' series (which give technical guidance on various building, engineering and equipment issues), the Fire Practice Notes series (dealing with various specialist aspects of fire precautions) and Nucleus guidance. Existing HTMs will, in due course, be reissued in FIRECODE format. The suite includes 'FIRECODE: Directory of Fire Documents' which lists references to relevant legislation and relevant fire precautions guidance issued by DHSS and other sources, for example, the Home Office. Publications in the existing HTM '80' series are listed in the Bibliography at the end of this HBN.

7.16 It is important to establish during the design stage those aspects of fire safety strategy which affect the design, configuration and structure of a project. At appropriate stages of the design process, the architect and engineer should discuss and verify their proposals with the local fire authority, and ensure that the project team and all other planning staff are fully acquainted with the fire safety strategy for the design in terms of operation (staff responsibilities etc), equipment provision, and buildings and engineering layouts. Health Technical Memoranda 57, 58, 59 and 60 give detailed information on the selection of fire resisting components. The principles of fire safety apply equally to new projects and to alternations and upgrading of existing buildings.

7.17 Wards for mentally ill patients present a high fire risk, especially at night. Some patients have a diminished sense of awareness which can result, for example, in carelessly discarding smoking materials, and it is possible that a very small number of patients may start fires. Some patients may be confused and slow to raise an alarm, or to co-operate in evacuating a danger area.

7.18 The accommodation should be planned to provide alternative horizontal routes of prescribed travel distances from all parts to a place of safety. The strategy is first to move horizontally away from the source of danger into a safe compartment or sub-compartment, and then to progress to another part of the building or directly to the outside of the building if necessary. For patients with mental illness the use of escape stairways is acceptable as a second stage of escape.

7.19 Each single room and multi-bedroom should be capable of being fully enclosed for the containment of smoke.

7.20 Compartmentation and sub-compartmentation should be designed so as not to interfere with the daily living activities of patients or the care of patients by staff.

Security

7.21 Assaults on hospital staff and theft of NHS property are recognised problems. The project team should discuss security with the officer in charge of the local Police Crime Prevention Department and the hospital or district security officer or adviser at an early stage in the design of the building. Fire and Security Officers should be consulted concurrently because the demands of security and fire safety may sometimes conflict. The attention of planners is drawn to Circular HN(84)26, dated December 1984 (in Wales, Circular WHN(85)1), about Security, and to the NHS Security Manual issued with the Circular. Established mental illness departments in other districts may also have useful advice to offer.

7.22 Security needs to be considered from both the point of view of security from ouside intruders and the safety and security of patients.

Protection from intruders

7.23 The security of the department from outside intruders must be given careful consideration. Special consideration should be given to fire doors on escape routes which are not part of the usual circulation to ensure that they are used only for their proper function. The front door will need to be lockable at night. A bell push is required at

the entrance to the department and to any self-contained component part of the unit.

7.24 Throughout the accommodation, except for ground floor windows looking onto courtyards, window openings should be restricted at the bottom to 100 mm for reason of security and to discourage intruders. On the ground floor, which is more vulnerable to intruders, the degree of restriction at the top of the window will be a matter for local decision, bearing in mind that the more a window can be opened the better the natural ventilation. On the first floor, some restriction of top opening is desirable but the amount should be left to local decision. However, in all sanitary and utility areas there should be restrictors to allow opening of windows 100 mm at both the top and bottom. Similarly, casement windows, if used, should be restricted at the side. All restrictors should be tamper-proof.

Patient protection

7.25 Some patients may attempt to harm themselves or others and so some precautions need to be taken, though the overriding safety measures are good staff/patient relationships. It is necessary to lock doors of those parts of the accommodation which are not used 'out of hours' and at weekends, eg some rooms in the day hospital, ECT suite, out-patients suite, and administration. Restricted window openings which can contain a patient intent on suicide or one who is seriously deluded should be provided in all areas, without impairing the natural ventilation (7.53). A window that is easy to climb out of is more of a temptation in areas where patients are not observed by other patients and staff, such as WCs, bathrooms, empty bedrooms or quiet parts of corridors. All the single and multi-bedrooms will require safety glazing. There should be no open stair wells. The cleaners' room should be lockable because it will contain toxic materials.

Valuables

7.26 Facilities should be provided for the temporary security of patients' valuables in each ward office and in the charge nurse's office in the day hospital. Valuables requiring longer-term storage should be kept in accordance with the whole hospital policy.

Drugs

7.27 Secure storage for Controlled Drugs will be required in the wards and the ECT treatment room. Because of their potential for abuse, normal control procedures over all drugs may need to be strengthened.

Damage in health buildings

7.28 When designing and equipping health buildings, the likely occurrence and effects of accidental damage should be considered. Damage in health buildings has increased over the years, to some extent as a result of lightweight, often less robust, building materials. Measures to minimise damage should be taken in the form of protective corners, buffers and plates where necessary, and to proper continuation of floor surfacing, ie strong screeds and fully bonded floor coverings. Protective devices, if used, should be capable of being renewed as need arises.

Maintenance and cleaning

7.29 Materials and finishes should be selected to minimise maintenance and be compatible with their intended function. Building elements that require frequent redecoration or are difficult to service or clean should be avoided. Special design consideration should be given to elements such as entrances, corners, partitions, counters and any others which may be subjected to heavy use. Floor finishes should be restricted in variety and, where soft floor coverings are specified and spillage is anticipated, should have a backing impervious to fluids and a non-absorbent pile. Wall coverings should be chosen with cleaning in mind. Health Technical Memoranda 56, 58 and 61 give guidance on these aspects for partitions, internal doorsets and flooring.

Provision for Automatic Data Processing (ADP)

7.30 Computing expertise is now widely available in the NHS and project teams should ensure that, at an early stage, they inform themselves concerning current and projected local computing policies, and that their proposals conform with them.

EDUCATION AND TRAINING

Undergraduate medical students

7.31 If it has been agreed that the teaching of undergraduate medical students will take place in the accommodation, and their numbers necessitate additional space, this should be provided as part of the overall requirements for the unit. Reference should be made to the Department's letter DS 65/74 about teaching hospital space requirements, issued on 22 March 1984, and letter DS 86/74 dated 27 March 1974. (In Wales, reference should be made to letter HSD 3/57/1 dated 29 April 1974.)

Postgraduate medical education

7.32 Although education requiring special facilities will take place in the district's education centre, some teaching has to take place in the patient areas. Apart from the use of seminar rooms, no special facilities are normally required elsewhere.

Nurse education

7.33 All districts undertake nurse education and most have the approval of the statutory body to conduct qualifying courses. As qualifying and formal post-basic courses are largely patient based, officers of the statutory body inspect or monitor patient areas (as well as teaching accommodation) for adequacy, volume and range of work.

7.34 Seminar rooms are required at ward or unit level. An office base for the clinical nurse teacher is also required. Theoretical elements of courses will be undertaken in the nurse education component of the education centre, or the school of nursing.

7.35 If satellite educational accommodation is required, then the requirements should be determined using the methodology described in HBN 42, 'Education and Training' (in preparation). This accommodation should be included when assessing the District's total requirements for education accommodation.

Other staff

7.36 The requirements of students in professions other than medical and nursing will need to be taken into account, and the appropriate people and/or bodies should be consulted at the initial planning stages.

Courtyards

7.37 There are several reasons why courtyards may usefully be provided in hospital buildings. They enable more rooms to receive natural daylight and ventilation, and can provide a stimulating outlook from patients' bedrooms and living areas and from staff areas, and thus compensate for the lack of a longer view. Suitable layout and planting can help to preserve privacy in surrounding rooms. Ground-cover planting is often more successful than grass and is easier to maintain.

7.38 It is desirable to provide access to courtyards from living areas and corridors wherever possible and thresholds should be designed to facilitate movement of disabled people. Seating should be provided. Access for maintenance and cleaning should be from a hospital street or other corridor so that patients and staff are not disturbed. Adequate water points, power-points and lighting, if necessary, should be provided in all courtyards. Reference should be made to HBN 45, 'External Works for Health Buildings' (in preparation).

Critical dimensions

7.39 Information on critical dimensions for some of the activities mentioned in this Note are included in the 'Common Activity Spaces' Building Note, HBN 40.

Component Data

7.40 The Component Data Base (Mark 3) contained specifications, design guidance and lists of selected components or firms producing selected components for use in health buildings, but has now been replaced by a series of Health Technical Memoranda (see Bibliography) which provide specification and design guidance on building components for health buildings which are not adequately covered by current British Standards. No firms or products are now listed.

Internal environmental conditions

Noise

7.41 In order for the environment to be relaxing and non-institutional in character, it will have to cater for both noisy and quiet activities and this should be borne in mind during the early stages of planning. In the wards it is important that sleeping areas, the quiet day space, interview rooms, and rooms where concentration is required, should not be adjacent to more noisy areas. Utility rooms and pantries likely to be used at night should not be so close to the bedrooms as to cause a disturbance.

7.42 In addition to appropriate planning measures, the effects of noise can be lessened by isolating sound sources with sound containing partitions and doors, by attenuating sound with acoustic materials and generally by use of soft floor coverings, curtains and other materials which do not reflect sound.

Heating and domestic hot water supply

7.43 Heat emitters should be chosen and sited so that they are not a hazard to patients.

7.44 See paragraph 8.39 concerning the requirements for distributing the domestic hot water.

Furnishings and finishes

7.45 Furnishings and finishes should be domestic in appearance but hardwearing. The problems of maintenance, cleaning and flammability should be borne in mind. (Flammability standards are set out in the Health Services Supply Purchasing Guide Vocabulary Section T).

Flooring

7.46 It is important to select a floor covering which contributes towards the creation of an attractive environment, but which does not present a hazard to disabled people or the movement of wheeled equipment. It is important that whatever floor covering is chosen can be effectively cleaned, maintained and, where necessary, repaired. Rapid developments in soft floor covering technology have produced a wide variety of new materials. (See report of the Floor Covering Study Group issued to Health Authorities with HN(78)32 (WHN(78)92 in Wales) and Health Technical Memorandum 61 – 'Flooring'.) Floors should not present or appear to present a slip hazard and the patterning should not produce disorientation. Changes of floor level should be avoided wherever possible. Surface drag, static electricity, flammability, and infection hazards are other factors which need to be considered. (See also 'Maintenance and Cleaning' – paragraph 7.29.)

Design features

7.47 The physical limitations of many people impose special demands on internal design and fittings. Features requiring special consideration are detailed in the following paragraphs.

Main entrance

7.48 The first impression gained by patients and visitors entering a mental illness unit is of fundamental importance. The design and furnishings of entrance, reception and waiting spaces should be warm and welcoming with a careful choice of decor, soft floor coverings, pictures and plants, which should be continued throughout the accommodation.

Shape of rooms

7.49 The shape and appearance of rooms have effects on people. Rooms which are square or nearly square are preferable for most purposes. Long, narrow tunnel-like rooms and rooms which are small, internal, badly lit or poorly ventilated, and which may therefore be claustrophobic, should be avoided. Rooms used for group therapy should allow patients to sit in a circle.

Doors

7.50 Doors should be wide enough to allow a clear space, if necessary, for patients using a walking aid and for the passage of wheelchairs. Lever handles should be 900 mm above the floor level. Rails across the sight-line of seated patients should be avoided in the design of glazed doors. If magnetic door closers are required to meet fire regulations, they should be carefully selected to minimise interference with day-to-day activities. Any locked fire exit doors must have the capability of release on the activation of the fire alarm, or a local release facility of a type not likely to tempt patients to misuse it.

7.51 Lockable internal doors used by patients should have an external release. In the bedrooms, some doors may need two leaves. In an emergency it must be possible to enter WCs from the outside, and doors should be fitted with easygrip bolt handles. Bi-fold doors are not suitable.

Windows

7.52 In addition to the various statutory requirements, the requirements for patient safety, ventilation and illumination, insulation against noise, thermal loss or solar gain, energy conservation, the prevention of glare and the provision of a visual link with the outside world, all need to be taken into consideration. In day rooms and bedrooms, sill heights should be not greater than 800 mm to enable patients when seated to look outside: floor to ceiling glazing is inappropriate. Requirements for cleaning the inside and outside of windows should not be overlooked.

Ventilation

7.53 Natural ventilation is usually caused by the effect of wind pressure. It will also occur to some extent if there is a temperature difference between inside and outside the building. This thermo-convective effect frequently predominates when the wind speed is low and will be enhanced if there is a difference in height between inlet and outlet openings. Ventilation induced by wind pressure can promote high air change rates through a building if air is able to move freely within the space from windward to the leeward side of the building. Internal partitions, fire compartment walls and closed doorways can, however, often impede the flow path and when this happens the process will be more dependent on single-sided ventilation. Nevertheless, even with this degree of obstruction to air movement, acceptable ventilation may still be obtained without excessive window openings which could prejudice safety, security and comfort. Some types of windows, eg vertical sliding, can enhance single-sided air exchange by temperature difference and these will improve the overall rate of natural ventilation in protected or sheltered areas where the effect of wind pressure is likely to be minimal. Section 2.3 of HTM 55 and BS 5925 provide further guidance on this subject.

Mirrors

7.54 Mirrors which can be used by sitting or standing patients should be available to encourage patients to have regard for their appearances. Some mirrors should be full-length. All mirrors should be unbreakable and non-distorting.

Colour schemes

7.55 Colour can be used to good effect for decorative and other purposes. Colour schemes can be devised to aid in the identification of particular rooms or parts of the department. Drab colours should be avoided.

Disabled people

7.56 It is essential to ensure that suitable access and facilities are provided for disabled people who have problems of mobility or orientation. This includes, besides the wheelchair-bound, those who for any reason have difficulty in walking and those with sensory handicap such as a visual or hearing impairment. Authorities are reminded of the need to comply with the provisions of the Chronically Sick and Disabled Persons Act 1970 as amended by the Chronically Sick and Disabled Persons (Amendment) Act 1976, the Disabled Persons Act 1981, the Building Regulations 1985, and the Building (Disabled People) Regulations 1987.

Attention is also drawn to BS 5810:1979 'Access for the Disabled to Buildings'. One of the effects of the 1981 Act is to apply this British Standard to premises covered by the 1970 Act, which includes those open to the public.

Signposting

7.57 To encourage patients to look after themselves, to use their initiative and to have freedom of movement about the unit, particular attention should be paid to signposting. The form of signposting used and the method of displaying notices should not detract from the desired environment but should be sufficiently explicit to be understood by patients who may be either confused or are from a different culture. Only certain doors require conventional labelling, eg fire exit doors, bathrooms, WCs and offices.

Internal spaces

7.58 Internal rooms may contribute to economy in planning but the resulting continuous need for artificial lighting and mechanical ventilation will add to both capital and running costs. Such rooms do not provide good working conditions hence should be used only for activities of infrequent or intermittent occurrence or which demand a controlled environment. Rooms that are likely to be occupied for any length of time by staff or patients should have windows.

Privacy

7.59 The design of the accommodation must preserve the privacy and dignity of patients particularly where men and women are treated in adjacent areas and share certain accommodation and circulation spaces. This must be reconciled with the need for unobtrusive observation which is vital for the care of the patient.

8 Engineering Services

8.1 This chapter describes the engineering services contained within a mental illness unit and their integration with the engineering systems serving a whole site. Its purpose is not to inhibit the design solution but to acquaint the engineering members of the multi-disciplinary design team with the criteria adopted (in the terms of material specification, design conditions and reference data) to meet the functional requirements.

8.2 Documents referred to by number, eg[10] are listed at the end of the chapter. They are numbered in order of first appearance, repeated references retaining the same number.

Model specifications

8.3 A series of model specifications for the specialised engineering services in health care buildings have been issued nationally and are sufficiently flexible to reflect local needs. The cost allowance for the engineering services in each functional unit of this accommodation is based on qualities of material and workmanship described in the relevant parts of the model specifications.

Economy

8.4 Engineering services are a significant proportion of the capital cost and thereafter remain a continuing charge on revenue budgets. Therefore the project design engineer should ensure not only the utmost economy in initial provision, consistent with meeting the functional requirements and maintaining clinical standards, but also the optimum benefit from the total financial resources these services are likely to absorb during their lifetime.

8.5 Where alternative design solutions are available their consequential capital and running costs should be compared using option appraisal techniques[1] so that due consideration is given to the need for, and the costs of, maintenance and the eventual replacement of plant and equipment.

8.6 The economic appraisal of alternative design solutions should include the heat conversion and distribution losses at the point of use. Where buildings are located remote from the development's load centre, these losses can often equal the useful energy consumed.

8.7 To encourage energy management, facilities for the temporary installation of metering for all services should be provided at main intake points to this department. HSE Data Sheet DR6[2] gives information on the selection and use of metering equipment.

8.8 After satisfying the Building Regulations[3] on the standards of thermal insulation provided, consideration should be given to the economics of additional insulation to the ground floor slab and to the roof (Engineering Data Sheet CE7[4] refers) particularly where accommodation is located in a building of low-rise construction. Where there is a solidly constructed ground floor, the inclusion of floor insulation will also contribute to patient and staff comfort. Guidance concerning the economic thickness of thermal insulation relative to the cost of energy, 'K' values, temperature differences, capital costs and hours of use is given in Engineering Data Sheet CE11.[5]

8.9 Similarly, in view of the increasing costs of generating heat energy, consideration should be given to the economics of appropriate equipment for recovering some of the value of the energy which would otherwise be discharged by mechanical ventilation systems, and also for programmed turning off, or reduction, of heating and ventilation in those spaces used only for part of the day.

Maximum demands

8.10 User demand on engineering services is often difficult to predict, but experience indicates that services designed for simultaneous peak conditions are seldom fully utilised in practice. The estimated maximum demand and storage requirement (where appropriate) for each engineering service in this accommodation will need to be assessed individually to take account of the range, size and shape of the functional units, geographical location, operational policies and intensity of use. As a guide, and for preliminary planning purposes only, the following are the estimated maximum demands for self-contained accommodation on a DGH site comprising:

a. 40 place day hospital, two 20-bed annex wards, ECT suite, administration and an out-patient clinic;

b. 20 place day hospital for elderly people including one 20-bed ward and administration but sharing an out-patient clinic.

Accommodation (a)

Service	*Typical maximum demand*	*Remarks*
Heating, ventilation, DHWS	90 kW	
Domestic hot water	2.5 litre/sec	Storage 4,000 litre (2 hour recovery)
Cold water supply	2.9 litre/sec	Storage 8,000 litre (24 hour supply)
Ventilation (supply)	2.1 m^3/sec	
Ventilation extract	2.4 m^3/sec	Clean and 'dirty'
Electrical	71 kW	Includes essential 43 kW
Piped medical gases	No requirement	
Fuel gas	0.5 litre/sec	
Steam	No requirement	

Accommodation (b)

Service	*Typical maximum demand*	*Remarks*
Heating, ventilation, DHWS	80 kW	
Domestic hot water	1.4 litre/sec	Storage 1,900 litre (2 hour recovery)
Cold water supply	1.9 litre/sec	Storage 4,500 litre (24 hour supply)
Ventilation (supply)	2.7 m^3/sec	
Ventilation extract	3.0 m^3/sec	Clean and 'dirty'
Electrical	51 kW	Includes essential 34 kW
Piped medical gases	No requirement	
Fuel gas	0.5 litre/sec	
Steam	No requirement	

Space requirements for services

8.11 The satisfactory performance of plant in health care buildings is particularly important and the design should allow for ease of access and space for the necessary frequent inspections and maintenance and for eventual removal and replacement. As far as practical, however, this access should be protected from unauthorised entry.

8.12 Recommended spatial requirements for mechanical, electrical and public health engineering services in health buildings are given in HTM 23.[6] The information in this publication is specifically intended for use during the initial planning stages when precise dimensional details of plant are not available.

8.13 The distribution of mechanical and electrical services to final points of use should, wherever possible, be concealed in walls and above ceilings. Heat emitters should be contained within a 200 mm wide perimeter zone under window sills and critical dimensions should be taken from the boundary of this zone. For costing purposes the 200 mm band which includes the floor area occupied by minor vertical engineering ducts is included in the building circulation provision.

Activity Data

8.14 User requirements, environmental conditions and equipment arrangements, as described in the Activity Data sheets (Chapter 10) should be referred to when positioning service components and outlets. Where the latter are for patient operation, they should be of the simplest pattern and designed to inhibit interference.

Safety

8.15 Section 6 of the Health and Safety at Work Etc Act 1974[7] imposes statutory duties on all persons who design, manufacture, supply, install or erect 'articles' for use at work, to ensure as far as is reasonably practicable that such articles are safe and without risk to health when properly used. Engineering components, eg pipework, terminals etc, are covered by the term 'articles' and thus these duties apply to the designers of engineering services for non-domestic buildings. The arrangements for guarding power operated machines and the provision of any dust extraction equipment in therapy workshops should be agreed with the local Area Inspector of the Health and Safety Executive.

Fire precautions

8.16 Design guidance relative to the fire precautions in new hospitals is given in HTM 81.[8] Technical information concerning the design and specification of fire detection and alarm systems is detailed in HTM 82[9] which also replaces or modifies certain clauses of BS 5839 Part 1[10] to meet the needs of health care premises. More general advice on fire prevention including the storage of flammable materials is given in HTM 83.[11]

8.17 The design of the engineering services should accord with the recommendations in the above series of HTMs and the engineer should verify his proposals in accordance with the procedure described in paragraph 7.15.

Noise

8.18 Excessive noise in the individual areas, whether internally or externally generated and transmitted, can adversely affect the operational efficiency of the department and can cause discomfort. The limits and means of control advocated in Hospital Design Note 4[12] including its revisions[13] and the means of control given in Engineering Data Sheet DH1[14] should provide an acceptable acoustic environment. In addition to designing for control of noise levels, there may be a need to ensure speech privacy, ie that confidential conversation is unintelligible in adjoining rooms or spaces. This will typically, but not exclusively, be required in consulting/examination rooms and interview rooms. The acceptable noise level, and any requirement for speech privacy, where applicable, in the individual spaces in this department is shown on the Activity Data 'A' Sheets.

Control access

8.19 Primary engineering distribution control and isolation devices should be protected against unauthorised operation, eg switchgear and fuse-boards should be housed in secure cupboards. They should be located in circulation rather than working areas and where appropriate water stopcocks to thwart deliberate flooding should be easily accessible for staff operation.

Engineering commissioning

8.20 It is most important that engineering services should be fully commissioned. HTM 17[15] describes the requirements which should be included in the design and building contract documents. Flow measurement and proportional balancing of air and water systems requires adequate test facilities eg orifice plates, venturi valves etc to be incorporated at the design stage.

Mechanical services

8.21 The mechanical services include the provision of heating, ventilation, hot and cold water and fuel gas supplies. For cost allowance purposes the distribution of all piped systems is deemed to commence at their point of entry into the accommodation and includes pipework, fittings, controls and connections to equipment and outlets. The cost allowance includes for air handling and treatment plants, ductwork and fittings, together with associated ventilation system controls.

8.22 For environmental requirements in individual spaces reference should be made to the Activity Data sheets. Recommended room temperatures, air change rates, hot water service temperatures etc are grouped under 'Technical Design Data' on each 'A' sheet. The 'B' sheets give the disposition of engineering outlets for the activities described.

Heating

8.23 The need for above average temperatures in areas used by elderly patients and a requirement for some space heating outside the normal heating season necessitates a heating system designed to allow flexibility of use and control.

8.24 General space heating requirements can be met by a low pressure hot water system using convectors or enclosed radiators designed to ensure that their surface temperature does not exceed 43°C. For additional protection all exposed hot water pipework accessible to touch should be lagged.

8.25 Heat emitters should normally be located under windows or against exposed walls, with sufficient clear space between the top of the radiator and the window sill to prevent curtains reducing the output, and adequate space below to allow cleaning machinery to be used. Where an emitter is located on an external wall, back insulation should be provided to reduce the rate of heat transmissions through the building fabric.

Temperature controls

8.26 To facilitate overall temperature control the heating system should normally be controlled via an external compensator and, if practicable, zoned relative to each major elevation of the building. Where overheating in individual rooms is likely to occur, eg solar gain, thermostatic radiator valves should be installed. These valves should be of robust construction and selected to match the temperature and pressure characteristics of the system. In patient areas the valves should be totally concealed within the heat emitter enclosure but shielded from direct radiation and able to sense the temperature at the return air grille. Where space is restricted, or heat gains and/or losses are particularly variable, consideration should be given to the provision of thermostatically controlled fan-convectors fitted with low-limit control, but only where the generated noise is unlikely to be a nuisance.

8.27 Where practicable, the heating system in the out-patient and those areas of the day patient accommodation not used during the evening or at weekends should be clock-controlled and programmed to accommodate the working hours of the unit. The control system, possibly incorporating an optimum-start device, should be used to set-back the space temperature to an anti-condensation level of approximately 10°C when the accommodation is closed (actual set-back to be determined from local trials). To allow for occasional abnormal hours of working, a conveniently sited manual override time restricted switch with visual indication should be provided for use by authorised staff.

Single bedrooms

8.28 The heat emitter in the 'special' single bedrooms should be similar to those provided in other patient areas except that the emitter enclosure should be designed to prevent unauthorised removal.

Ventilation

8.29 Recommendations for the ventilation of individual spaces in this department are shown on Activity Data 'A' sheets. Mechanical ventilation systems are expensive in terms of capital and running costs and planning solutions should be sought which take maximum advantage of natural ventilation.

8.30 It is acknowledged that planning constraints imposed by the building shape and/or functional relationships of specific spaces will invariably result in some measure of enclosed internal areas. Ventilation costs can however be minimised by ensuring that wherever practicable core areas are reserved for rooms that require mechanical ventilation irrespective of whether their location is internal or peripheral. Examples are: sanitary facilities, dirty utility, beverage preparation areas, and rooms whose clinical or functional requirements have specific environmental needs and where for reasons of privacy of solar gain etc, windowless accommodation is acceptable. Other spaces appropriate to core areas are those which have only transient occupation and therefore require little or no mechanical ventilation. Examples are circulation and some storage areas.

8.31 Air movement induced by mechanical ventilation should be from clean to dirty areas, where these can be defined. Diffusers and grilles associated with mechanical ventilation should be located to encourage uniform air movement within the space. The design should allow for an adequate flow of air into any space having only mechanical extract using transfer grilles in doors or walls to connect such spaces to naturally ventilated corridors or spaces with mechanical air supply. Such arrangements, however, should avoid the introduction of untempered air and should not prejudice the requirements of fire safety or privacy.

8.32 Mechanical ventilation should be provided in the ECT room and in other treatment rooms. It should also be provided in those wards and day spaces used exclusively by elderly patients.

8.33 Where mechanically ventilated compartments, eg bedrooms for the elderly, are separated from enclosed internal spaces, eg sanitary facilities, by totally enclosed corridors, then a supply air system will be required with sufficient volume to ensure that the corridor is maintained at positive pressure.

8.34 The fresh air supply should be tempered and filtered before being distributed via high level diffusers with output profiles designed to avoid discomfort to lightly clad patients. Ventilation supply plant should include air filters having a minimum average dust spot efficiency of 25% and a minimum arrestance of 85% when tested in accordance with BS 6540 Part 1.[16] Filters must be readily accessible for replacement and maintenance purposes and provided with a pressure-differential indicator; coarse pre-filters may be necessary where the intake air is exceptionally polluted. Heater batteries should be sized for the ventilation requirements only, ie not the fabric loss. All heater battery coils should be provided with frost protection.

8.35 Extract ventilation will be required in all beverage preparation rooms including therapy kitchens and dining room servery and in all areas used for occupational therapy where the particular activity is liable to cause dust or fumes eg pottery and woodwork.

8.36 A separate extract system will be required for 'dirty' areas, eg utility and sanitary facilities and a dual motor/fan unit with an automatic changeover facility should be provided to ensure that these rooms are always maintained at a negative pressure when the unit is in use.

8.37 External discharge arrangements for extract systems should be protected against back pressure from adverse wind effects and located to avoid re-introduction of exhausted air into the building through air intakes and windows.

Ventilation controls

8.38 Supply and extract ventilation systems should include indicator lamps to confirm the operational status of each system. Where the use of the system is on a regular daily pattern, a time-switch control with manual override for a limited period should be considered. Where a system is provided for a particular space the indicator should be in or immediately adjacent to that space and local controls should be provided as appropriate. In the case of a more general system of ventilation, eg toilet areas, the indicator should preferably be located at the staff base. Where manual controls are available for staff use they should be provided with labels clearly defining their function.

Hot, cold and drinking water services

8.39 The domestic hot water should be taken from the hospital calorifier installation at an outflow temperature of 60°C, ±2½°C, and distributed to all outlets so that the return temperature at the calorifier is not less than 50°C. The safety of some patients could however be compromised if they are allowed unsupervised use of bathing facilities that are supplied with water at this temperature. This risk can be reduced by installing at each bath and shower outlet a locally adjustable thermostatic mixing valve, preset and locked to provide a blended water temperature of 43°C, ±2°C. The mixing valve should be of a type that is unaffected by changes in water pressure and should be 'fail-safe' ie automatically close the hot water supply if the cold water supply fails. The provision of one mixing valve to supply a group of baths or showers is not acceptable. Vigilance will still be required to ensure that vulnerable patients using wash basins or sinks are not in prolonged contact with water the draw-off temperature of which will be within the range of 50°C to 60°C. Outlet fittings for wash basins and sinks are shown on Activity Date 'B' Sheets.

8.40 Guidance concerning the design and installation of cold water supply pipework and distribution systems is given in HTM 27.[17] For frost protection purposes and to prevent condensation staining decorative finishes all cold water pipework, valves and flanges should be insulated and vapour sealed.

8.41 Where fully potable cold water systems are not provided drinking water outlets should be provided in the clean utilities, pantries, and all food and beverage preparation areas. The supply should be direct from the mains or from a protected tank.

8.42 To limit the risk of Legionnaires disease, the water services should be designed in accordance with the recommendation in HN(87)17.[18] After completion, all water systems should be flushed through and disinfected as detailed in BS 6700.[19]

Fuel gas installation

8.43 Fuel gas outlets in patient areas should be regarded as a potential hazard. Each item of equipment should be connected via an approved safety cock of the drop-lever or similar type with plug-in connector and flexible piping, all conforming to British Gas Council recommendations and the Gas Safety Regulations.[20] All gas burners should be provided with flame failure protection.

8.44 Where a mains gas supply is not cnveniently available and the requirement for other gas fuelled catering, servery or occupational therapy equipment is minimal, the use of portable LPG bottles may be economically justified in therapy kitchens.

Fire-fighting equipment

8.45 Fire-fighting equipment should consist of either hose-reels or portable fire extinguishers positioned so that adequate cover is given to the whole interior of the department. Hose-reels, in accordance with BS 5306 Part 1[21] and usually with 30 m of hose, should be located so that the jet of water from the fully extended hose is capable of reaching every point on the floor area without interruption after due allowance is made for furniture and fittings. The provision of hose reels should be considered in conjuction with the Fire Officer to avoid potential problems arising from hoses being taken through smoke stop doors and across routes for the evacuation of beds or wheelchairs.

8.46 As an alternative to hose-reels, 9 litre water extinguishers should be provided on the basis of one extinguisher per 200 m² of floor area with a minimum provision of two extinguishers per fire compartment.

8.47 Carbon dioxide extinguishers should always be provided to cover electrical risks, but other risks eg ignited liquid or gas, either carbon dioxide or dry powder extinguishers are appropriate. All extinguishers should comply with BS 5423[22] and further guidance concerning their selection and use is given in HTM 81.[8]

Piped medical gases and vacuum

8.48 Normally there is no requirement for these services in this accommodation. A mobile oxygen trolley and portable medical vacuum apparatus should be available for emergency use in the ECT treatment room and for sharing between wards (4.33).

Electrical services

8.49 The electrical installation will include main intake switchgear, the wiring and equipment for lighting, power, and environmental plant together with the earth bonding of extraneous metalwork. Extensions from the hospital central system for telephones (conduits only), clocks, fire alarms and staff location services, together with staff call systems, will also be required. These installations should comply in all respects with the current IEE Regulations for Electrical Installations[23] and conform to the requirements of HTM 7.[24]

8.50 Reference should be made to the Activity Data sheets for the recommended levels of internal illumination, disposition of outlets for power, telephones, call systems, and clocks etc in individual spaces.

8.51 The point of entry for the electrical supply will be a departmental switchroom housing the main isolators, with provision for metering, and the main distribution equipment. The switchroom will also be the distribution centre of subsiiary electrical services and, wherever possible, all equipment should be mounted at a height to give easy access from a standing position. The switchroom should

be positioned so as to minimise the cost of cabling required to serve the accommodation.

Electrical installation

8.52 The electrical installations in occupied areas should be concealed usually using PVC insulated cable in screwed steel conduit or trunking; but in certain circumstances, mineral insulated copper covered cables may be necessary. External installations should comprise PVC insulated cables in galvanised screwed steel conduit with fittings of weatherproof pattern. Steel conduit and trunking wiring ways for communication systems should also be concealed wherever possible.

Electrical interference

8.53 Guidance concerning the avoidance and abatement of electrical interference is given in HTM 14[25] and fluorescent luminaires (lighting fittings) should comply with BS 5394.[26]

8.54 Care should be taken to avoid mains borne interference and electrical radio frequency interference affecting computers and other electronic equipment used here or elsewhere on a hospital site.

Lighting

8.55 Practical methods of lighting the various functional spaces are contained in the CIBSE Lighting Guide[27] and the choice of luminaire should take account not only of the requirements for light distribution and visual comfort appropriate to the space, but also the operational efficiency of the light source used. Luminaires should be of a type which are easily cleaned and maintained, as well as being manufactured and tested in accordance with the requirements specified in the relevant sections of BS 4533.[28] Their location should be readily accessible for lamp changing and maintenance, but with the overriding requirement that the recommended standard of illuminance is provided at the working plane. In non-domestic areas luminaires using fluorescent lamps should be installed when artificial lighting is required for long periods or where areas are devoid of natural light; intermittently used luminaires may be fitted with incandescent or compact fluorescent lamps.

8.56 In reception and circulation areas, colour graphics and lighting should be co-ordinated to create a calm and welcoming atmosphere whilst also contributing to the safe movement of patients throughout the department. For patient day areas, a humanistic design approach is required to achieve settings that are domestic in scale and which provide sufficient variation of local lighting to undertake the various individual and group activities.

8.57 The special needs of some elderly people with failing eyesight will need to be considered. For example, it may be appropriate to allow for some adjustable supplementary lighting to be available in day and assessment areas.

8.58 It is essential that fluorescent lighting in clinical areas is derived from one of the recommended types of lamps having suitable colour rendering characteristics.[29] In such areas the colours chosen for walls, floors and ceilings should be carefully selected; architects and engineers should collaborate to ensure that the decorative finishes are compatible with the colour rendering properties of the lamp and that spectral distribution of the light source is not unduly altered. HN(85)20 (in Wales, CAWO(85)3)[30] describes some high efficiency fluorescent lamps with good colour rendering properties which are also suitable for general use within this accommodation.

8.59 Control of lighting is normally by local switches and these should be provided in sufficient numbers to allow variation in lighting options eg reduced levels of illuminance when circumstances permit, and to encourage energy conservation. This is particularly relevant in rooms where, because daylight is restricted, supplementary artificial lighting is required for long periods in areas remote from windows. Although higher standards of illuminance are often recommended for enclosed internal spaces, excessive contrast with adjacent areas should be avoided.

Lighting in bed areas

8.60 The requirements for lighting in bed areas will differ according to their functional use. Luminaires in bed areas should comply with the requirements of BS 4533: Sections 102.55 and 103.2.[31]

8.61 *Patients requiring minimal nursing care.* The recommended average illuminance is 100 lux in the circulation area with supplementary lighting at the bed-head. Night lighting is also required and should be designed to provide an indirect illuminance of 1 lux on the pillow but with maximum illuminance in the circulation area (particularly in the vicinity of the door) to allow staff to move across the whole space with safety. The luminaires should be selected, and the lighting system as a whole should be designed to present a domestic, rather than institutional, character so as to contribute to the general philosophy of care described in paragraphs 4.19–4.25.

8.62 *'Special' room.* The lighting pattern should be similar to that described above except that all luminaries should be fully recessed ceiling fittings with polycarbonate or similar vandal-proof diffusers. The general lighting luminaire and the night-light luminaire (the latter located to illuminate the area immediately behind the door) should be individually controlled by switches external to the room. The above bed-head luminaire should be ceiling mounted and controlled by a wall switch adjacent to the bed-head, with an override switch which isolates the wall switch circuit mounted external to the room. All diffusers and switch cover plates within the room should have hexagon socket or similar tamper-proof fixings.

8.63 *Elderly patients with mental illness.* The standard of illumination provided at the bed-head (at normal bed height) by the general lighting should be 30–50 lux. The illumination in the centre of the room (ie the walking space between bed-ends in multi-bedded rooms) should be not less than 100 lux. Additionally, wall-mounted fixed-arm luminaires should be positioned at each bed-head at a minimum height of 2 m above floor level to provide an illuminance of 150 lux for reading purposes. The shades of wall-mounted luminaires in multi-bedrooms may be adjustable, but movement should be limited to prevent disturbance to other patients.

8.64 The avoidance of glare from general lighting luminaires is important and their lamps should be screened from direct vision of a patient in bed to a limiting luminance of not more than 1,800 candelas per m^2 (700 candelas per

m^2 for recessed ceiling-mounted luminaires). Similarly the directly perceived luminance of a night luminaire should not exceed 30 candelas per m^2. These restrictions should also be applied to luminaires in corridors and circulation spaces which are visible from beds through unscreened glazing.

Lighting of corridors and staff base

8.65 The lighting of corridors can make a major contribution to the creation of a non-institutional environment in this department. The use of indirect fluorescent light sources, eg wall-washing techniques, using fluorescent lamps concealed by a pelmet or cornice to enhance interior finishes and decor, combined with the judicious location of ceiling luminaires and illuminated signs to indicate a corridor junction or a particular facility can produce a more domestic type ambience. The lighting of circulation space should be to an average level of 150 lux and in bed areas should be controlled by switches located at the staff base. Corridor night lighting should provide an average floor illumination of 10 lux and should be separately switched.

8.66 The localised night lighting of the staff base should provide 200 lux on the table. This will meet the needs of staff and act as a focal point for patients at night.

Lighting of treatment rooms

8.67 A ceiling or wall mounted double arm examination luminaire should be located above the couch. This should operate at extra low voltage, be totally enclosed, be equipped with a heat filter, and the temperature of external surfaces must be such as to avoid injury to patients and staff. These luminaires should comply with the requirements of BS 4533: Section 102.55[31] and be in accordance with the performance specification of Type B included in BS 4533: Section 103.2.[31]

Lighting of therapy areas

8.68 Fluorescent luminaires should be generally used throughout these areas and should be circuited to avoid stroboscopic effects where rotating machinery is used. Ceiling mounted luminaires positioned above work benches and equipment are preferable to portable lamps for task lighting.

8.69 Where maximum flexibility of use is required, eg light workshop, it may be advantageous to install ceiling mounted power track. This will allow task lighting and power supplies for portable therapy equipment to be directly accessible without the hazard of trailing cables and has the potential for changing lighting patterns to suit other group activities.

Amenity lighting

8.70 Luminaires in day spaces, dining rooms etc should be domestic in character and selected to harmonise sympathetically with furnishings and decor. Because of the significant effect of lighting on interior design and revenue budgets the final choice of luminaire should be acceptable to both the architect and engineer.

Bed-head units

8.71 With the exception of bed-head lighting previously mentioned and patient/staff call points (see paragraphs 8.61–8.63 and 8.83) no other bed-head services are required.

Controlled Drugs cupboard

8.72 In compliance with HC(77)16[32] (WHN(77)32 in Wales) a red indicating lamp should be provided on each Controlled Drugs cupboard, with a remote indicating lamp where appropriate outside the doorway to the room in which the cupboard is located, at the corresponding staff base, and after hours (eg ECT suite) in a continuously manned area external to the accommodation. The lamps should be interlocked with the cupboard to give visual indication when the cupboard is unlocked and should be supplied from an essential circuit. For further information see HTM 63 Fitted Storage Systems[33] and its associated specification for electrical services. The cupboards should be in accordance with BS 2881.[34]

Socket-outlets

8.73 Sufficient 13 amp switched, shuttered socket-outlets, connected to ring or spur circuits should be provided to allow all portable appliances likely to be used simultaneously to be individually supplied. Activity Data sheets indicate specific locations for the outlets associated with individual activities; the installation of twin outlets should be considered where these activities occur in juxtaposition.

8.74 Socket-outlets in the 'special' single bedroom should have cover plates with tamper-proof screws and be controlled by an externally located key operated isolating switch.

8.75 Domestic cleaning appliances with flexible leads 9 m long should be assumed and socket outlets, usually in corridors, should be provided to enable such machines to operate over the whole area of the accommodation.

8.76 Fixed appliances rated up to 13 amps should be permanently connected to double pole switched spur boxes and fused as required. Appliances rated in excess of this load, or those requiring a three-phase supply, should be permanently connected to separate final circuits from fuse-boards and independently switched.

8.77 Switches or other means of isolation should be provided adjacent to electrical machinery and plant to ensure the safety of operators and maintenance staff.

8.78 A master control switch or stop button for emergency isolation of power supplies should be located in a prominent position in each therapy room containing power driven machines.

8.79 Heating appliances and automatically operated equipment should be provided with indicator lights to show when the equipment is energised. Such indicators should be incorporated in the control panel of the apparatus, in the control switch, or in the socket-outlet from which the apparatus derives its supply. The electrical supply connections to electro-medical equipment should comply with BS 5724.[35]

X-ray equipment

8.80 The use of mains-operated mobile X-ray equipment will not normally be required in this accommodation.

Emergency electrical supplies

8.81 Guidance concerning the provision of emergency electricity supplies is given in HTM 11,[36] and the grade of

standby lighting provisions is shown on the Activity Data 'A' sheets. Safety lighting in accordance with HTM 11[36] and BS 5266[37] should be provided on primary escape routes.

8.82 Socket-outlets should be so distributed that, in each area where essential equipment may be used, socket-outlets connected to at least two separate ring circuits of common polarity are available. All socket-outlets in the in-patient accommodation for elderly patients, the ECT suite and all communication, clock and alarm systems throughout the department should be connected to the essential electricity supply system.

Patient/staff call system

8.83 Patient/staff call points should be provided at all bed positions and in all patient sanitary areas in the in-patient and day-patient accommodation. Each call unit should comprise a push button, reassurance lamp and reset switch. All call points in each bedroom should be controlled by a key operated isolator located on the corridor side of the entrance door. The isolator should have an integral pilot lamp to indicate when patient call points are energised.

Staff/staff alarm system

8.84 Staff/staff call points should be provided in all patient areas of the in-patient and day patient accommodation including patient sanitary facilities. Each call unit should comprise a pull switch, reassurance lamp and reset switch and should be installed 600 mm above floor level immediately adjacent to the closing stile of all doors leading to patient areas. Where double doors are provided, eg bedrooms, the call unit should be installed adjacent to the hanging stile of the narrow leaf.

Call systems (general)

8.85 A visual and audible indication of operation should be provided at the staff base to give responding staff unambiguous identification of the call type and source. The audible signal initiated by patients should operate for one second at 10 second intervals until cancelled. The audible alarm signal initiated by staff should operate intermittantly at half second intervals and if, after a predetermined period, it has not been cancelled, the alarm should be automatically triggered at an adjacent staff base. Hospital policy may also require a staff/staff emergency alarm to be transferred to a centrally manned point.

8.86 Local visual indication of room source to supplement that provided at the staff base may be required in circulation spaces serving the in-patient and day patient accommodation. If this facility is provided staff/staff alarm calls should be readily distinguishable from patient/staff calls.

8.87 All call systems should operate at extra-low voltage and further general guidance is given in HTM 15[38] and Engineering Data Sheet DU 3.1.[39]

Call systems (out-patients)

8.88 In the out-patient accommodation patient/staff call points with a staff/staff call facility will be required in all patient toilets and a staff/staff call point will be required in the treatment room and all consulting/examination rooms. An indication of operation similar to that in the in-patient accommodation should be provided at the reception desk.

8.89 Some clinicians may prefer to call their patients personally but generally a simple and unobtrusive 'next-patient' call system will be required. This should comprise an illuminated indicator panel and warning buzzer of subdued tone located at the reception desk.

Staff location system

8.90 The staff location system employed in the hospital should be extended to give adequate cover to this department. Guidance on these systems is given in HTM 20.[40]

Wiring for telephones

8.91 Central telephone facilities for internal and external calls, either in separate or combined form, will normally be available and should be extended to service this accommodation in accordance with the requirements shown on Activity Data sheets. Telephones will normally be of the desk pattern but in bed areas, or adjacent to them, they should be fitted with an indicating call-light and a bell or buzzer of subdued tone which can be switched out of use.

8.92 Approved telephone outlets for use with a coin-operated telephone trolley should be provided in single and multi-bedrooms and also where ambulant patients may use a telephone with reasonable privacy. An outlet should also be provided at the normal parking location of this mobile unit. To assist patients with impaired hearing the handset earpiece should be fitted with an inductive coupler suitable for use with hearing aids. To minimise revenue costs all outlets should be common to one out-going exchange line.

Electric clocks

8.93 Clocks should operate in conjuction with a master clock system. If such a system is not available synchronous clocks should be installed using a common clock circuit suitable for future connection to a master system. The location of clocks indicated on Activity Data sheets acknowledges their therapeutic contribution to the rehabilitation of patients but in circulation areas they should be installed only where they can be viewed by numbers of staff/patients/ visitors.

Radio and television

8.94 The radio/television relay system should be supplied via the hospital communal aerial installation and central amplification equipment.

8.95 Radio reception loudspeakers each incorporating a programme selector, on/off switch and lockable volume control should be provided in all therapy areas, dining rooms and in all main sitting rooms not designated as quiet areas. The provision of radio and television reception facilities at bed-heads is deemed unnecessary in this accommodation.

8.96 A coaxial outlet for television reception should be provided in the main sitting room in the day patient and in-patient accommodation.

Group therapy

8.97 Concealed conduits for interconnections between microphones and recording equipment will be required when an observation room is provided in association with the behavioural therapy room.

Lightning protection

8.98 Protection against lightning should be provided in accordance with HTM 7[24] and HSE Data Sheet DB 2.[41]

Internal Drainage

8.99 The primary objective is to provide an internal drainage system that uses the minimum of pipework and remains water and air-tight at joints and connections, but is sufficiently ventilated to retain the integrity of water seals.

Design parameters

8.100 General design guidance is given in the relevant British Standards and Codes of Practice including BS 5572,[42] and the current Building Regulations. Recommendations regarding spatial and access requirements for public health engineering services are given in HSE Data Sheet EA5.[43] To prevent interference by patients, covers of access points should be protected against easy removal.

8.101 The gradient of branch drains should be uniform and adequate to convey the maximum discharge to the stack without blockage. Practical considerations such as available angles of bends/junctions and their assembly, as well as space considerations, usually limit the minimum gradient to about 1:50 (20 mm/m). For the larger pipes, eg 100 mm diameter, flatter gradients can be used but require workmanship of a high standard if adequate self-cleansing flow is to be maintained. It is not envisaged that pipes larger than 100 mm diameter will be required within inter-floor or ground floor systems serving this accommodation.

Operational considerations

8.102 Unusual and difficult maintenance problems can arise because of user interference and abuse. For example, the disposal of paper towels into WCs after hand-washing or after their misuse for some other purpose is a frequent cause of blockages particularly in long branches laid to flat gradients. Adequate provision of disposal receptacles or where appropriate the installation of warm-air dryers can help to mitigate this problem.

Materials specification

8.103 The materials specified for the drainage system in this accommodation will depend upon their location and the nature of the effluent being discharged. Waste pipework should, as far as practicable, be concealed; where exposed, it should be metallic and very securely fixed. Although adequate for the drainage requirements UPVC may not always be acceptable to the fire officer and neither should it be installed above 'sensitive' areas, eg switchrooms, operating, intensive therapy, radio-diagnostic or catering departments, etc.

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9 Cost Chapter

9.1 For all types of health buildings it is clearly of vital importance that building and running costs should be kept as low as possible consistent with acceptable standards. Within this general context building notes provide a synopsis of accommodation for health buildings which the Department, in conjunction with the National Health Service, recommends for the provision of a given service.

Works cost

9.2 To prepare an estimate of the works cost for a scheme, reference should be made to the Capricode Health Building Procedures Manual (Chapter 1, Stage 1, Annex 1 c.). The total department cost for a scheme is derived by aggregating the cost of the functional units, Essential Complementary Accommodation (ECA) and Optional Accommodation and Services (OAS) as appropriate to the particular scheme.

9.3 The Departmental Cost Allowance (DCA) covers the building and engineering requirements set out in this Note. In the costing of the functional units it has been assumed that they will be combined in a variety of ways to form a mental illness unit which will be incorporated in a whole hospital. When a functional unit (ie day hospital, out-patients suite, etc) is to be located in a community setting it will be necessary to add provisions such as kitchens, boiler house, stores etc. This Note has taken no account of these provisions and the necessary sums will need to be allowed for these functions (9.9—9.10).

9.4 The functional units for this Note are:

10, 20, 30 and 40 Place day hospital
10, 20, 30 and 40 Place day hospital for the elderly
10, 15, 20 and 25 Bed annex wards
10, 15, 20 and 25 Bed self-contained wards
10, 15, 20 and 25 Bed wards for the elderly
Small and Large out-patient suite
ECT suite
Small and Large administration suite

The activity spaces and areas used for costing each functional unit are listed in the 'basic accommodation' schedule at the end of this chapter.

Day hospital

9.5 These functional units have been considered in increments of 10 places up to 40. They have been conceived to operate in combinations with the bed annex wards but can equally operate independently. It is expected that with the addition of some support provisions (9.3), they can be used in the community either as day hospitals or, with some modification, as resource centres. If the need arises for larger day hospitals it is considered that combinations of these functional units can be considered with consequent savings of the ancillary spaces.

Bed annex ward

9.6 The bed annex ward is intended to be adjacent to a day hospital to form an integrated unit. It is expected that a unit will comprise at least two bed annex wards, a day hospital and possibly an out-patients suite and/or an administration suite. This combination will prevent the duplication of dining and sitting areas thus allowing the day hospital to be more intensively used. It is not envisaged that the day hospital will be remote from the bed areas.

Self-contained ward

9.7 On some occasions (3.10b) it may be thought that a ward containing recreation and therapy spaces may be required. These wards are much larger than the bed annex ward, and are, therefore, more expensive per bed to provide. It is unlikely that more than one such ward would need to be provided (eg as an admission/assessment ward) and if this is the case, consideration must be given to its location in relation to other annex wards and their associated day hospital. With a mix of ward functional units it is expected that the day hospital will be sized economically and take account of the fact that some therapy spaces have been incorporated in the self-contained ward.

Out-patients suite

9.8 Two sizes of suite have been considered. As with the Administration suite, this may be provided at a hospital or in a community setting.

ECT suite

9.9 One size of suite has been provided and it is considered that the accommodation will be suitable for most health authorities needs. As the suite will not be in constant use it is thought that waiting and recovery areas can have alternative use ie Group Therapy, one to one sessions, etc.

Administration suite

9.10 Two sizes of suite have been considered and it is for the design team to assess its need. These functional units may be provided in a hospital or in the community perhaps associated with day hospitals or other health or primary care facilities. Additional ancillary spaces may need to be provided if independently sited.

Essential Complementary Accommodation (ECA)

9.11 This comprises costed activity spaces which may be considered as essential to the running of the mental illness unit but which have not been included in the functional units discussed in Chapter 4. They are as follows:

Wards
Special bedroom
Ensuite WC and washing

Day hospital (in a community setting)
Treatment/Clean utility
Staff dining/rest – small and large

However, the amount of ECA which will be needed to be provided as part of an individual project will vary according to the extent of the provision available elsewhere or required at the specific location.

Optional Accommodation/Services (OAS)

9.12 This Note, where appropriate, draws attention to alternative ways of providing service or facilities, including the likely cost implications. This information will allow project teams to select the solution which is most suitable to their needs. In the case of day hospitals in a community setting, the OAS will allow additional services to be provided, if considered desirable. The OAS costed in this Note are:

Day hospital (in a community setting)
Patients utility
Cleaners room
Disposal room
Office/Interview

Day hospital for the elderly (in a community setting)
Treatment bathroom
Assisted shower and WC

9.13 The following OAS discussed in this Note has not been costed:

Cooking facilities (4.3(2))

Dimensions and areas

9.14 In determining spatial requirements, the essential factor is not the total area provided but the critical dimensions, ie those dimensions critical to the efficient functioning of the activities which are to be carried out. To assist project teams in preparing detailed design solutions for the rooms and spaces, some studies have been carried out to establish dimensional requirements in the form of critical dimensions. The results of these studies appear as ergonomic diagrams in the 'Common Activity Spaces', Health Building Note (HBN 40).

9.15 It is recognised that for development planning and at the earliest stage of the design process, it may be convenient for designers to have data available which will enable them to make an approximate assessment of the sizes involved. For this reason the schedules of areas which have been prepared for the purpose of establishing the DCA are included at the end of this chapter. It is emphasised that the areas published DO NOT represent recommended room sizes nor specific individual entitlements.

Circulation

9.16 The schedule of areas used for costing will have an area for circulation, within each functional unit, shown as an addition. It should be noted that for convenience the areas allowed for planning provision, engineering zone and for partitions are included in the area allowed for circulation.

Communication – plant space

9.17 Plant rooms, with the exception of an electrical switchroom, are not included in the DCA.

Engineering services

9.18 The following engineering services as described in the Engineering Chapter and exemplified in Activity Data are included in the DCA. Primary engineering services are assumed to be conveniently available at the boundary of the department.

a. *Mechanical Services*

Heating:
Low pressure hot water system with zone control for aspect.
Maxium touch temperature generally 43°C (82°C in offices in Administration).

Ventilation:
Mechanical supply and extract to meet clinical and functional requirements; other areas to be naturally ventilated.

Cold water service:
Centrally supplied to service points, including drinking water and fire hose reels. Storage tanks excluded.

Hot water service:
Centrally supplied to service points with local thermostatic temperature reduction at patient baths and showers. Storage excluded.

b. *Electrical Services*

Departmental distribution switchboard.

General lighting as required by tasks.
Fluorescent, tungsten, safety and emergency luminaires as appropriate.

Socket outlets and other power outlets for fixed and portable equipment. Supplementary equipotential earth bonding connections.

Stand-by and safety installations from the main hospital supplies.

Patient/Staff and Staff/Staff call systems.

Fire, security and drug cupboard alarm systems.

Impulse clocks.

Radio and television relay outlets as extensions to the hospital system.

Staff location extensions to the hospital system.

Telephone internal distribution cabling and outlets (handsets not included).

Data transmission conduits only.

c. *Equipment (Group 1)*

Medical examination luminaires in treatment rooms and ECT room. Bed pan washer (for ward accommodation).

Schedule of Activity Spaces

FUNCTIONAL UNIT – DAY HOSPITAL ADULTS

Activity space	*Space area m²*	*10 Places*		*20 Places*		*30 Places*		*40 Places*	
		Quantity no	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*
Dining spaces	16.00	1	16.00	2	32.00	3	48.00	4	64.00
Pantry	12.00	1	12.00	1	12.00	1	12.00	1	12.00
Sitting/Group therapy	25.00	–	–	1	25.00	1	25.00	1	25.00
Quiet sitting	19.50	1	19.50	1	19.50	1	19.50	1	19.50
Clean/Dirty work areas	20.00	1	20.00	2	40.00	3	60.00	4	80.00
Bulk store	4.50	1	4.50	2	9.00	3	13.50	4	18.00
ADL kitchen	20.00	1	20.00	1	20.00	1	20.00	1	20.00
ADL hairdressing	11.00	–	–	–	–	1	11.00	1	11.00
OT office	8.50	–	–	–	–	1	8.50	1	8.50
OT/Physiotherapy office	12.00	1	12.00	1	12.00	–	–	–	–
Assessment/Office (physiotherapy)	13.00	–	–	–	–	1	13.00	1	13.00
Physiotherapy/Activities areas	20.00	1	20.00	2	40.00	3	60.00	4	80.00
Bulk store	3.00	1	3.00	2	6.00	3	9.00	4	12.00
Staff office (reception)	12.50	0.5	6.25	0.5	6.25	1	12.50	1	12.50
Staff cloaks	5.00	0.5	2.50	0.5	2.50	1	5.00	1	5.00
Staff WC	3.00	1	3.00	1	3.00	2	6.00	2	6.00
Patients' cloaks	4.50	1	4.50	1	4.50	2	9.00	2	9.00
WC and WHB	3.00	1	3.00	2	6.00	3	9.00	3	9.00
Assisted WC	4.50	1	4.50	1	4.50	1	4.50	2	9.00
Consulting/Interview	8.50	–	–	–	–	1	8.50	1	8.50
Storage	4.00	1	4.00	2	8.00	2	8.00	3	12.00
Switch cupboard	1.00	1	1.00	2	2.00	3	3.00	4	4.00
NETT TOTAL			155.75		252.25		365.00		438.00
CIRCULATION, ETC			51.25		83.75		126.00		151.00
TOTAL			207.00		336.00		491.00		589.00
DEPARTMENTAL TOTAL			205.00		335.00		490.00		590.00

FUNCTIONAL UNIT – DAY HOSPITAL ELDERLY

Activity space	*Space area m²*	*10 Places*		*20 Places*		*30 Places*		*40 Places*	
		Quantity no	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*
Dining spaces	19.00	–	–	–	–	3	57.00	4	76.00
Pantry	12.00	1	12.00	1	12.00	1	12.00	1	12.00
Sitting/Dining	25.00	1	25.00	2	50.00	–	–	–	–
Sitting	20.00	–	–	–	–	1	20.00	2	40.00
Sitting/Group therapy	25.00	–	–	–	–	1	25.00	1	25.00
Quiet sitting	19.50	1	19.50	1	19.50	1	19.50	1	19.50
Clean/Dirty work areas	20.00	1	20.00	2	40.00	3	60.00	4	80.00
Store	4.50	1	4.50	2	9.00	3	13.50	4	18.00
ADL kitchen	20.00	1	20.00	1	20.00	1	20.00	1	20.00
ADL hairdressing	11.00	–	–	–	–	1	11.00	1	11.00
OT office	8.50	–	–	–	–	1	8.50	1	8.50
OT/Physiotherapy office	12.00	1	12.00	1	12.00	–	–	–	–
Assessment/Physiotherapy office	13.00	–	–	–	–	1	13.00	1	13.00
Physiotherapy/Activities areas	20.00	1	20.00	2	40.00	3	60.00	4	80.00
Bulk store	3.00	1	3.00	2	6.00	3	9.00	4	12.00
Staff office (reception)	12.50	0.5	6.25	0,5	6.25	1	12.50	1	12.50
Staff cloaks	5.00	0.5	2.50	0.5	2.50	1	5.00	1	5.00
Staff WC	3.00	1	3.00	1	3.00	2	6.00	2	6.00
Patients' cloaks	4.50	1	4.50	1	4.50	2	9.00	2	9.00
WC and WHB	3.00	1	3.00	2	6.00	2	6.00	3	9.00
Assisted WC	4.50	1	4.50	1	4.50	2	9.00	2	9.00
Assisted shower/WC/WHB	6.00	–	–	–	–	1	6.00	1	6.00
Assisted bathroom	12.50	0.5	6.25	0.5	6.25	0.5	6.25	1	12.50
Consulting/Interview	8.50	–	–	–	–	1	8.50	1	8.50
Storage	4.00	1	4.00	2	8.00	3	12.00	4	16.00
Switch cupboard	1.00	1	1.00	2	2.00	3	3.00	4	4.00
NETT TOTAL			171.00		251.50		411.75		512.50
CIRCULATION, ETC			60.00		88.50		150.25		186.50
TOTAL			231.00		340.00		562.00		699.00
DEPARTMENTAL TOTAL			230.00		340.00		560.00		700.00

Schedule of Activity Spaces (cont)

FUNCTIONAL UNIT – BED ANNEX WARD

Activity space	*Space area m²*	*10 Beds*		*15 Beds*		*20 Beds*		*25 Beds*	
		Quantity no	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*
Single bedroom with WHB	10.00	3	30.00	4	40.00	5	50.00	5	50.00
Four-bed room – divan	34.00	–	–	1	34.00	2	68.00	2	68.00
Five-bed room – divan	42.50	1	42.50	1	42.50	1	42.50	2	85.00
Two-bed room – Kings Fund	22.00	1	22.00	1	22.00	1	22.00	1	22.00
WC with WHB	3.00	1	3.00	1	3.00	1	3.00	2	6.00
Assisted shower/WC/WHB	4.50	1	4.50	2	9.00	3	13.50	3	13.50
Assisted bath	12.50	0.5	6.25	0.5	6.25	1	12.50	1	12.50
Domestic bath	7.00	–	–	1	7.00	1	7.00	2	14.00
Staff office (reception)	12.50	0.5	6.25	0.5	6.25	0.5	6.25	1	12.50
Staff base	6.50	1	6.50	1	6.50	1	6.50	1	6.50
Staff WC	3.00	1	3.00	1	3.00	1	3.00	2	6.00
Staff cloaks	5.00	0.5	2.50	0.5	2.50	1	5.00	1	5.00
Patients utility/Flower bay	10.00	1	10.00	1	10.00	1	10.00	1	10.00
Clean utility	9.50	0.5	4.75	0.5	4.75	1	9.50	1	9.50
Dirty utility	9.00	0.5	4.50	0.5	4.50	1	9.00	1	9.00
Disposal room	4.00	0.5	2.00	0.5	2.00	0.5	2.00	1	4.00
Quiet room	10.00	1	10.00	1	10.00	1	10.00	1	10.00
Equipment store	5.00	1	5.00	1	5.00	1	5.00	2	10.00
Bulk store	1.50	1	1.50	1	1.50	2	3.00	3	4.50
Patients' store	2.00	1	2.00	1	2.00	2	4.00	2	4.00
Linen supplies	3.00	1	3.00	1	3.00	2	6.00	2	6.00
Cleaners' room	6.00	0.5	3.00	0.5	3.00	0.5	3.00	0.5	3.00
Switch cupboard	2.00	0.5	1.00	1	2.00	1.5	3.00	2	4.00
NETT TOTAL			173.25		229.75		303.75		375.00
CIRCULATION, ETC			59.75		79.25		104.25		129.00
TOTAL			233.00		309.00		408.00		504.00
DEPARTMENTAL TOTAL			235.00		310.00		410.00		505.00

Schedule of Activity Spaces (cont)

FUNCTIONAL UNIT – SELF-CONTAINED WARD

Activity space	*Space area m²*	*10 Beds*		*15 Beds*		*20 Beds*		*25 Beds*	
		Quantity no	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*
Single bedroom with WHB	10.00	3	30.00	4	40.00	5	50.00	5	50.00
Four-bed room	34.00	–	–	1	34.00	2	68.00	2	68.00
Five-bed room	42.50	1	42.50	1	42.50	1	42.50	2	85.00
Two-bed room – Kings Fund	22.00	1	22.00	1	22.00	1	22.00	1	22.00
WC with WHB	3.00	1	3.00	1	3.00	1	3.00	2	6.00
Assisted shower/WC/WHB	4.50	2	9.00	2	9.00	3	13.50	3	13.50
Assisted bath	12.50	0.5	6.25	0.5	6.25	1	12.50	1	12.50
Domestic bath	7.00	–	–	1	7.00	1	7.00	2	14.00
Staff office (reception)	12.50	0.5	6.25	0.5	6.25	1	12.50	1	12.50
Staff base	6.50	1	6.50	1	6.50	1	6.50	1	6.50
Staff WC	3.00	1	3.00	1	3.00	1	3.00	2	6.00
Staff cloaks	5.00	0.5	2.50	0.5	2.50	0.5	2.50	1	5.00
Patients utility/Flower bay	10.00	1	10.00	1	10.00	1	10.00	1	10.00
Clean utility	9.50	0.5	4.75	0.5	4.75	1	9.50	1	9.50
Dirty utility	9.00	0.5	4.50	0.5	4.50	1	9.00	1	9.00
Disposal room	4.00	0.5	2.00	0.5	2.00	0.5	2.00	1	4.00
Equipment store	5.00	1	5.00	1	5.00	2	10.00	2	10.00
Bulk store	1.50	1	1.50	2	3.00	3	4.50	4	6.00
Patients' store	2.00	1	2.00	1	2.00	2	4.00	2	4.00
Linen supplies	3.00	1	3.00	1	3.00	2	6.00	2	6.00
Cleaners' room	6.00	0.5	3.00	0.5	3.00	0.5	3.00	0.5	3.00
Switch cupboard	2.00	0.5	1.00	1	2.00	1.5	3.00	2	4.00
Sitting/Dining	23.00	1	23.00	2	46.00	–	–	–	–
Sitting room	18.00	–	–	–	–	1	18.00	2	36.00
Dining space	32.00	–	–	–	–	1	32.00	1	32.00
Pantry	12.00	1	12.00	1	12.00	1	12.00	1	12.00
Quiet/Therapy room	–	1	15.00	1	22.50	2	30.00	2	37.50
Work/Activities area	10.00	1	10.00	2	20.00	3	30.00	4	40.00
Store	3.00	1	3.00	2	6.00	3	9.00	4	12.00
OT office	8.50	–	–	–	–	1	8.50	1	8.50
Consulting/Interview	10.00	1	10.00	1	10.00	1	10.00	1	10.00
NETT TOTAL			240.75		337.75		453.50		554.50
CIRCULATION, ETC			83.25		116.25		155.50		190.50
TOTAL			324.00		454.00		609.00		745.00
DEPARTMENTAL TOTAL			325.00		455.00		610.00		745.00

Schedule of Activity Spaces (cont)

FUNCTIONAL UNIT – ELDERLY PEOPLE (ASSESSMENT AND SHORT-TERM TREATMENT WARD)

Activity space	*Space area m²*	*10 Beds*		*15 Beds*		*20 Beds*		*25 Beds*	
		Quantity no	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*	*Quantity no*	*Total m²*
Single bedroom with WHB	11.00	5	55.00	6	66.0	7	77.00	7	77.00
Four-bed room – Divan	34.00	–	–	–	–	1	34.00	1	34.00
Four-bed room – Kings Fund	39.00	–	–	1	39.00	1	39.00	1	39.00
Five-bed room – Divan	42.50	1	42.50	1	42.50	1	42.50	2	85.00
Assisted WC with WHB	4.50	1	4.50	2	9.00	3	13.50	4	18.00
Assisted shower/WC/WHB	6.00	1	6.00	1	6.00	1	6.00	1	6.00
Assisted bath	12.50	0.5	6.25	0.5	6.25	1	12.50	1	12.50
Domestic bath	7.00	1	7.00	1	7.00	1	7.00	2	14.00
Staff office (reception)	12.50	0.5	6.25	0.5	6.25	1	12.50	1	12.50
Staff base	6.50	1	6.50	1	6.50	1	6.50	1	6.50
Staff WC	3.00	1	3.00	1	3.00	2	6.00	2	6.00
Staff cloaks	5.00	0.5	2.50	0.5	2.50	1	5.00	1	5.00
Patients utility/Flower bay	10.00	1	10.00	1	10.00	1	10.00	1	10.00
Clean utility	9.50	0.5	4.75	1	9.50	1	9.50	1	9.50
Dirty utility	9.00	0.5	4.50	1	9.00	1	9.00	1	9.00
Disposal room	4.00	0.5	2.00	0.5	2.00	0.5	2.00	1	4.00
Quiet room	10.00	1	10.00	1	10.00	1	10.00	1	10.00
Equipment store	5.00	1	5.00	1	5.00	2	10.00	2	10.00
Bulk store	2.00	1	2.00	2	4.00	2	4.00	3	6.00
Patients' store	2.00	1	2.00	2	4.00	2	4.00	3	6.00
Linen supplies	3.00	1	3.00	1	3.00	2	6.00	3	9.00
Cleaners' room	6.00	0.5	3.00	0.5	3.00	0.5	3.00	0.5	3.00
Sitting/Dining space	25.00	1	25.00	2	50.00	–	–	–	–
Sitting	20.00	–	–	–	–	1	20.00	2	40.00
Dining space	19.00	–	–	–	–	2	38.00	2	38.00
Pantry	12.00	1	12.00	1	12.00	1	12.00	1	12.00
Interview	10.00	1	10.00	1	10.00	2	20.00	2	20.00
Switch cupboard	1.00	1	1.00	2	2.00	3	3.00	4	4.00
NETT TOTAL			233.75		327.50		422.00		506.00
CIRCULATION, ETC			83.25		115.50		148.00		177.00
TOTAL			317.00		443.00		570.00		683.00
DEPARTMENTAL TOTAL			315.00		445.00		570.00		685.00

FUNCTIONAL UNIT – OUT-PATIENTS SUITE

Activity space	*Space area m²*	*Small*		*Large*	
		Quantity no	*Total m²*	*Quantity no*	*Total m²*
Reception/Waiting	16.00	1	16.00	1	16.00
Consulting (physical examination)	14.00	2	28.00	4	56.00
Consulting	13.00	1	13.00	2	26.00
Viewing room	6.00	–	–	1	6.00
Treatment/Clean utility	11.00	0.5	5.50	1	11.00
Dirty utility	8.00	0.5	4.00	1	8.00
Staff WC	3.00	1	3.00	2	6.00
Staff cloaks	–	1	5.00	1	7.00
Assisted WC	4.50	1	4.50	2	9.00
Bulk store	6.00	–	–	1	6.00
Consulting/Interview	10.00	2	20.00	3	30.00
NETT TOTAL			99.00		181.00
CIRCULATION, ETC			27.00		49.00
TOTAL			126.00		230.00
DEPARTMENTAL TOTAL			125.00		230.00

FUNCTIONAL UNIT – ECT SUITE

Activity space	*Space area m²*	*Quantity no*	*Total m²*
Reception/Waiting	16.00	1	16.00
Ante room	9.00	1	9.00
Treatment	23.00	1	23.00
Utility room	5.50	1	5.50
Recovery room (recumbant)	29.00	1	29.00
Recovery room (sitting)	16.00	1	16.00
Store (trolley bay)	4.50	1	4.50
Assisted WC	4.50	1	4.50
NETT TOTAL			107.50
CIRCULATION, ETC			22.50
TOTAL			130.00
DEPARTMENTAL TOTAL			130.00

Schedule of Activity Spaces (cont)

FUNCTIONAL UNIT – ADMINISTRATION SUITE

Activity space	*Space area m²*	*Small*		*Large*	
		Quantity no	*Total m²*	*Quantity no*	*Total m²*
Interview	10.00	3	30.00	6	60.00
Clerical office	10.50	1	10.50	2	21.00
Seminar/Conference	16.50	1	16.50	1	16.50
Store	3.00	1	3.00	2	6.00
WC and WHB	3.00	1	3.00	1	3.00
Assisted WC	4.50	–	–	1	4.50
Staff WC	3.00	1	3.00	2	6.00
Patients' sub-waiting	–	1	4.50	1	6.00
Switch room	–	1	2.00	1	4.00
NETT TOTAL			72.50		127.00
CIRCULATION, ETC			22.50		40.00
TOTAL			95.00		167.00
DEPARTMENTAL TOTAL			95.00		165.00

ESSENTIAL COMPLEMENTARY ACCOMMODATION:

Activity space	*Space area m²*	*Circulation, etc m²*	Total m²
Wards			
Special bedroom	13.00	3.00	16.00
Ensuite WC and Wash	4.00	1.00	5.00
Community Day Hospital			
Treatment/Clean utility	11.00	2.00	13.00
Staff dining/Rest – small	12.00	2.00	14.00
– large	18.00	4.00	22.00

OPTIONAL ACCOMMODATION/SERVICES

Activity space	*Space area m²*	*Circulation, etc m²*	Total m²
Community Day Hospital			
Patients' utility	10.00	2.00	12.00
Office/Interview	10.00	2.00	12.00
Cleaners' room	6.00	1.00	7.00
Disposal room	4.00	1.00	5.00
Elderly Community Day Hospital			
Treatment bathroom	13.50	3.00	16.50
Assisted shower, etc	4.50	1.00	5.50

10 Activity Data

10.1 The expression 'Activity Data' refers to an information system developed to help project and design teams by defining the users' needs more precisely. This information constitutes the Activity Data Base, which was issued to Regional Health Authorities in England and to the Health Departments in Scotland, Northern Ireland and Wales in 1976. It comprises two types of information sheet: Activity Space Data sheets (known as 'A' sheets) and their supporting Activity Unit Data sheets (known as 'B' sheets). 'A' sheets record, in more detail than is described in this Note, each task or activity that is performed in a particular activity space (which may be a room, space or bay) together with details of the environmental conditions and the technical data necessary to enable the activities to be performed. Each 'A' sheet also contains a list of the titles and code numbers of the relevant 'B' sheets.

10.2 'B' sheets provide narrative text and graphics to scale relating to one activity. They show equipment fitted or supplied as part of the building and the necessary engineering terminals. There are also 'component B sheets' which show a range of particular components rather than an activity.

10.3 Further information about the use and preparation of Activity Data can be found in the "Guide to 'A' and 'B' Activity Data Sheets and their use in Health Building Schemes" which was issued to Regional Health Authorities in June 1980 and to NHS Authorities in Wales in November 1980. Copies of the Guide are available from the Department's Directorate of Works Development, Branch DEV 1.1, Euston Tower, 286 Euston Road, London NW1 3DN.

Activity Data applicable to this Note

10.4 The 'A' sheets recommended for the activity spaces described in this Note are either new sheets, amended ones, or selected from existing sheets. Their code numbers and titles are provided on the lists which follow.

10.5 Further Activity Data sheets may be selected, or drawn up by project teams to their own requirements, for any services not described in the Note or included in the lists. Members of project teams are advised to contact their Regional Activity Data Co-ordinator/Welsh Office for information and advice about the selection of Activity Data, at an early planning stage. However, in order to ensure consistent and economic provision, variations from the 'A' sheets recommended for the spaces covered in this Note should be considered only where it has been decided that the function of a space will substantially differ from that described.

Activity Data 'A' Sheets

DAY HOSPITAL – ADULTS

Activity space	*'A' sheet code no*	*Para no in building note*
Dining room	D0606	4.3
Pantry	P0610	4.3
Sitting/Group therapy	D1114	4.4/4.7
Quiet room	D1109	4.6
Clean/Dirty activity area	Q0505	4.8 a, b
Clean/[Quiet] activity	Q0410	4.8 a
Dirty/[Noisy] activity	Q0216	4.8 b
Store	W1109	4.8
ADL kitchen	Q0114	4.8 c
Beauty/Hairdressing	Q0115	4.8 d
OT office	M1007	4.8 e 4.9 b
Physiotherapy activity	Q0601	4.9 a
OT/Physiotherapy office	M0532	4.9 b
Assessment/Office (physiotherapy)	C0307	4.9 b
Bulk store	W1417	4.9 c
Staff office/Reception	J0411	4.11
Staff cloaks	V0504	4.12
Staff WC	V1008	4.12
Patients cloaks	V2208	4.15
Patients WC	V1109	4.13
Assisted WC	V1217	4.13
Stores	W1508	4.15
Consulting/Interview	M0708	4.42
Switch cupboard	K0101	8.50

DAY HOSPITAL – ELDERLY

Activity space	*'A' sheet code no*	*Para no in building note*	
Dining room	D0610		6.5 f
Pantry	P0610	4.3	
Sitting/Group therapy	D1125	4.4/7	6.5 f
Quiet room	D1126	4.6	
Clean/Dirty activity area	Q0511	4.8 a/b	
Clean [Quiet] activity	Q0411	4.8 a	
Dirty [Noisy] activity	Q0217	4.8 b	
Store	W1109	4.8 b	
ADL kitchen	Q0114	4.8 c	
Beauty/Hairdressing	Q0115	4.8 d	
OT office	M1007	4.8 e 4.9 b	
Physiotherapy activity	Q0610	4.9 a	
OT/Physiotherapy office	M0532	4.8 e 4.9 b	
Assessment office (physiotherapy)	C0307	4.9 b	
Bulk store	W1417	4.9 c	
Staff office/Reception	J0411	4.11	
Staff cloaks	V0504	4.12	
Staff WC	V1008	4.12	
Patients WC	V1109	4.13	
Patients WC (assisted)	V1217		6.5 d
Patients cloaks	V2208	4.15	
Assisted shower	V1612		6.5 c
Assisted bath	V1708		6.5 c
Sitting	D1124		6.5 f
Sitting/Dining	D0809		6.5 f
Stores	W1508	4.15	
Consulting/Interview	M0708	4.42	
Switch cupboard	K0101	8.50	

BED-ANNEX WARD – ADULTS

Activity space	*'A' sheet code no*	*Para no in building note*
Single room	B0506	4.23
Four-bed room – Divan	B0606	4.25
Five-bed room – Divan	B0608	4.25
Two-bed room – Kings Fund	B0605	4.25
WC with WHB	V1109	4.26
Assisted shower	V1612	4.27
Assisted bath	V1708	4.27
Domestic bath	V1715	4.27
Staff office/Reception	J0411	4.29
Staff base	T0106	4.30
Staff WC	V1008	4.31
Staff cloaks	V0504	4.31
Patients utility	Y0503	4.32
Clean utility	T0604	4.33
Dirty utility	Y0309	4.34
Disposal room*	Y0603	4.35
Quiet room	Q0116	4.36
Equipment store	W1407	4.37 a
Bulk store	W1417	4.37 b
Patients store	W1418	4.37 c
Linen store	W1419	4.37 d
Cleaners space	Y1051	4.17
Switch cupboard	K0101	8.50

*HBN 40, 'Common Activity Spaces', Vol 1.

SELF-CONTAINED WARD – ADULTS

Activity space	*'A' sheet code no*	*Para no in building note*
Single room	B0506	4.23
Four-bed room – Divan	B0606	4.25
Five-bed room – Divan	B0608	4.25
Two-bed room – Kings Fund	B0605	4.25
WC with WHB	V1109	4.26
Assisted shower	V1612	4.27
Assisted bath	V1708	4.27
Domestic bath	V1715	4.27
Staff Office/Reception	J0411	4.29
Staff base	T0106	4.30
Staff WC	V1008	4.31
Staff cloaks	V0504	4.31
Patients utility	Y0503	4.32
Clean utility	T0604	4.33
Dirty utility	Y0309	4.34
Disposal room	Y0603	4.35
Equipment store	W1407	4.37 a
Bulk store	W1417	4.37 b
Patients store	W1418	4.37 c
Linen supplies	W1419	4.37 d
Sitting Room	D1111	4.38
Sitting/Dining	D0808	4.38
Dining space	D0606	4.39
Pantry	P0610	4.40
Quiet/Therapy room	Q0509	4.41
Work/Activities area	Q0508	4.41
Store	W1417	4.41
OT Office	M1007	4.41
Office/Interview	M0708	4.42
Cleaners space	Y1051	4.17
Switch cupboard	K0101	8.50

WARD – ELDERLY (ASSESSMENT AND SHORT-TERM TREATMENT)

Activity space	*'A' sheet code no*	*Para no in building note*
Single room	B0508	4.23 + 6.5 c
Four-bed room—Divan	B0611	4.25 + 6.5 c
Four-bed room—Kings Fund	B0612	4.25 + 6.5 c
Five-bed room	B0613	4.25 + 6.5 c
Assisted WC with WHB	V1217	6.5 d
Assisted shower*	V1612	6.5 e
Assisted bath*	V1708	6.5 e
Domestic bath	V1715	6.5 e
Staff office/Reception	J0411	4.29
Staff base	T0106	4.30
Staff WC	V1008	4.31
Staff cloaks	V0504	4.31
Patients utility	Y0503	4.32
Clean utility	T0604	4.33
Dirty utility	Y0309	4.34
Disposal room	Y0603	4.35
Sitting/Dining	D0809	4.36
Quiet room	Q0118	4.36
Equipment store	W1407	4.37 a
Bulk store	W1417	4.37 b
Patients store	W1418	4.37 c
Linen supplies	W1419	4.37 d
Sitting	D1124	4.38
Dining space	D0610	4.39
Pantry	P0610	4.40
Consulting/Interview	M0708	4.42 + 6.5g
Cleaners space	Y1051	4.17
Switch cupboard	K0101	8.50

*HBN 40, 'Common Activity Spaces', Vol 1.

ECT SUITE

Activity space	*'A' sheet code no*	*Para no in building note*
Reception/Waiting	J0804	4.45 a
Ante room	J1207	4.45 b
Assisted WC	V1217	4.45 c
Treatment	X0104	4.45 d
Dirty Utility	Y0308	4.45 e
Recovery (recumbent)	B2406	4.45 f
Recovery (sitting)	B2408	4.45 h
Store (Trolley bay)	W1109	4.45 g

OUT-PATIENTS SUITE

Activity space	*'A' sheet code no*	*Para no in building note*
Reception/Waiting	J0804	4.47 a
Consulting (physical examination)	C0207	4.47 b
Consulting	C0208	4.47 c
Viewing room	H0511	4.47 c
Treatment/Clean utility	X0702	4.47 d
Dirty utility	Y0407	4.47 e
Staff WC	V1008	4.47 f
Assisted WC	V1217	4.47 f
Bulk Store	W1417	4.47 g
Interview	M0708	4.48 a
Staff cloaks	V0504	4.31

ADMINISTRATION SUITE

Activity space	*'A' sheet code no*	*Para no in building note*
Office/Interview	M0708	4.48 a
Clerical Office	M0308	4.48 a
Seminar/Conference	H0510	4.48 b
Patients sub-waiting – small	J1205	4.48 c
– large	J1206	
WC with WHB	V1109	4.48 d
Assisted WC	V1217	4.48 d
Staff WC with WHB	V1008	4.48 d
Store	W1535	4.48 e
Switch cupboard	K0101	8.50

ESSENTIAL COMPLEMENTARY ACCOMMODATION/OPTIONAL ACCOMMODATION/SERVICES

Activity space	*'A' sheet code no*	*Para no in building note*
Disposal room	Y0603	4.16
Cleaners space	Y1051	4.17
Special single room	B0507	4.24
Assisted shower*	V1618	4.27
Patients utility	Y0503	4.32
Treatment/Clean utility	X0702	4.33 4.47 d
Office/Interview	M0708	4.48 a
Treatment bathroom*	V1720	6.4 c 6.5 e
Staff rest – small	DO507	9.9
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*HBN 40, 'Common-Activity Spaces', Vol 1.

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Appendix 1 to HBN 35

Mental Illness: Policies for Prevention, Treatment, Rehabilitation and Care

(Extract from Cmnd. 9674)

DEPARTMENT OF HEALTH

REFERENCE ONLY
PLEASE DO NOT REMOVE
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Appendix 1

Extract from Cmnd 9674*

MAR
THE POLYTEC
OF NORTH LONDON

COMMUNITY CARE

with special reference to adult mentally ill and mentally handicapped people

November 1985

MENTAL ILLNESS: POLICIES FOR PREVENTION, TREATMENT, REHABILITATION AND CARE

Introduction

1. This revised note, prepared by DHSS Mental Health Division in consultation with professional colleagues, replaces earlier versions. It provides a summary of mental illness policies advocated by the Department. It does not describe any new policies; or seek to specify the detail of good professional practice or the precise arrangements appropriate for a particular Region or District.

2. The main long-term aim for mental health services, including services concerned with misuse of alcohol, drugs and solvents, is the creation of a comprehensive range of services, provided, where the NHS is concerned, within a District and in the context of a Regional plan which takes account of Departmental priorities and policy and of District needs and resources including social, educational, housing, employment and all other voluntary, statutory and independent services. Consultation with other service providers and the consumers will enable all those involved to work together and relate to the changing needs of mentally ill people and their families.

3. The elements that go to make up a comprehensive district service are broadly those set out in the 'Better Services for the Mentally Ill' White Paper of 1975 complemented by the 1978 Report of a Working Group on the Organisational and Management Problems of Mental Illness Hospitals (the Nodder Report). The urgent tasks for NHS services remain the three set out in paragraph 5.9 of the Handbook 'Care in Action' (see paragraphs 15–18 below).

District Health Services – in Hospitals

4. Most people with mental illnesses are not in hospital. The hospital, with its specialist staff and facilities, provides a community resource, not simply an in-patient resource. The essential elements are:

i. A psychiatric department which includes facilities for in-patient, out-patient and day-patient assessment, treatment and rehabilitation, with support for those discharged after a stay in hospital. (The revision of Health Building Note 35 (Accommodation for mentally ill people), discusses the function of such a department in a District with a new pattern of services).

ii. Accommodation within the District General Hospital for assessment and short-term treatment of elderly people with psychiatric disorders. (Where there is a psychiatric department in the hospital this accommodation usually forms part of it).

iii. Local accommodation, perhaps in smaller hospitals or new units, for continuing care and relief and intermittent care, for some elderly patients.

iv. In-patient accommodation for the 'old long-stay' patients who were admitted before modern methods of treatment and care were available. Caring for these patients is concentrated in the 90 or so Districts with traditional psychiatric hospitals. Many of these patients regard the hospital as their home, but psychiatrists continue to discharge those for whom suitable arrangements can be made when this seems in the patient's interest. From a combination of discharges and deaths, the number continues to decline quite rapidly (see paragraph 17.iii.). The consequential effects of proposed hospital closures on 'old long-stay' patients and the recommended action are discussed in paragraph 18.

v. Continuing in-patient care for a small number of more recently admitted people – the 'new long-stay' patients – who despite advances in treatment cannot be supported in the community. They should not be expected to live indefinitely in the ordinary busy psychiatric in-patient setting. Plans will be needed for suitable

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*Note: Not issued in Wales.

accommodation such as a hospital hostel along the lines discussed in the 1975 White Paper (paragraph 4.54). DHSS has information on current studies in this field.

District Health Services – in the Community

5. A comprehensive service requires resources in the community away from the hospital. Psychiatrists and other health care staff are increasingly involved in the patient's home setting and in working in health centres and with primary health care teams away from their hospital base. The primary care team and associated community support services are crucial services are crucial to the care of the large number of people with mental health problems – not always diagnosed as such – who have no, or no continuing contact with specialist services.

6. A Community Psychiatric Nursing (CPN) service is an important component of health service provision in the community. The nurses work as members of a multi-disciplinary team in a variety of settings eg GP surgeries, health centres, day hospitals, psychiatric departments. They aim to provide treatment and nursing care in the community (and so prevent admission to hospital) and to provide after-care services following discharge from hospital. Some Districts have also developed specialist CPN services, eg for elderly mentally ill people and for drug misusers.

7. Day hospitals will be needed – preferably not all on the same site as in-patient accommodation. In some Districts crisis intervention and other services are run by a multidisciplinary team; sometimes mental health centres are set up in the centre of populations to provide ready access. In other Districts day hospital staff may join with local authority staff to provide combined day care, linking clinical, social and occupational functions to assist with rehabilitation and support. Advice about rehabilitation is provided in 'Psychiatric Rehabilitation in the 1980s' (Royal College of Psychiatrists 1980).

Services Provided by Local Authorities, Other Statutory Authorities, Voluntary Organisations and Private Bodies

8. These services need to complement NHS services in the care of people with a mental illness. Sited in the community they serve, they can aim to meet the whole range of accommodation, occupation and support needs of mentally ill people in a given area. Co-operation between all parties and co-ordination of provision are essential if a sensible and comprehensive network of services is to be achieved for all age groups. The range of services can include day centres, residential homes, hostels, sheltered accommodation, supported lodging schemes, ordinary housing, group homes, social clubs, drop-in centres, sheltered workshops and self-help groups: as well as education, training and employment services.

9. The revised procedures for registering residential care homes, announced in LAC(84)15, have increased local authorities' opportunities to influence standards of care. Individual social security entitlement enables any one of a range of residential options to be supported. A code of practice 'Home Life' has been published to provide practical advice and guidance to registering authorities.

10. Private hospitals and mental nursing homes may enable health authorities to find places not otherwise available for particular categories of patient at a cost not disproportionate to the patient's needs.

Joint Planning

11. This is essential for the proper use of both existing and any new resources. Collaboration is needed:

— at strategy level to encompass health and local authority services and the voluntary sector, in an integrated network to meet the full range of needs, to achieve jointly owned policies and to avoid unnecessary duplication of services through parallel developments. To achieve this a mental illness sub-group of the joint care planning team, or some similar joint team, is needed;

— at operational level to create multi-disciplinary teams, to integrate as far as possible professional services such as occupational therapy and community psychiatric nurse/social workers, using the 'key worker' approach when this can improve care, to organise joint training where appropriate and to generate ideas for the joint development of services.

12. Joint finance can make an important contribution to developments. It is aimed at encouraging collaboration and should be used to promote joint strategies, rather than isolated schemes outside the agreed pattern of development. 'Care in the Community' offers wide scope for transferring resources to enable people to move into community care where this will benefit them, in line with the policy aim of switching from hospital to community care. See paragraph 21 below, HC(77)17, HN(82)9, HC(83)6 and HC(84)9.

Certain Specialised Services

13. In addition to general psychiatric services and services for elderly people with mental illness, which are needed in every District, each Region will need a strategy for its adolescent and children's services, for secure units and forensic services and for alcohol, drug and solvent misuse. (1975 White Paper, chapters 5, 7 and 8). Some of these may require a Regional or sub-regional base, but where possible the aim should be to move towards a District based service, accessible to consumers.

i. *Children and adolescents.* The service should be District based and since the mental health and general well being of children and adolescents are much influenced by family circumstances and housing, social and

educational factors, close and effective collaboration is essential with statutory services and voluntary bodies with related responsibilities or interests. There is a need for each District to have a Child Psychiatry Team responsible for the assessment, care and support of those patients and their families whose requirements exceed the service provided by the primary care and educational services.

The basic team should include a psychiatrist, a psychologist and a social worker, who will spend the majority of their working time within the child and adolescent field. The contributions of other therapists, community nurses and health visitors should be clearly recognised. The detailed composition of the team will depend on local assessment of need, the predominant clinical requirements of the client group and the provision of facilities within the educational and child care systems as well as within the health authority.

Whenever possible both children and adolescents should be treated on an out-patient or day-care basis, but in-patient accommodation should be easily accessible, either within paediatric provision, or on an inter-district or sub-regional basis. The involvement of the child psychiatry team in support and advice to both educational and child care statutory services is essential and should be recognised in planning.

Adolescents require specific facilities relevant to their age and their need for peer group support. It is an advantage if some clinic facilities are available on a 'walk-in' basis in informal surroundings, not necessarily hospital-based; evening clinics may be of value for the older adolescent. The particular needs of the severely disturbed adolescent may best be provided at a sub-regional or regional level, or by increased psychiatric and social work support of existing residential facilities within the child care system. The criteria for admission and assessment need to be flexible in order to help this group.

ii. *Mentally ill (or mentally handicapped) patients who are violent or are offenders, or are for various reasons difficult to place.* Each Region needs to develop a strategy so that it can offer a comprehensive range of accommodation and services for such patients so that NHS deficiencies in accommodation or in the necessary skills to manage them do not mean that people who ought to be in-patients in NHS hospitals remain in prison, in special hospitals, or in the community. Regional secure units and interim secure units are important elements in this range, but other elements are needed also. For example the Region should know where care can be given to mentally handicapped people who need medium security with a suitable environment; to mentally handicapped people with mental illness; and to mentally ill people who are not expected to improve further with treatment but who need long-term care with medium security. (See 'Care in Action' paragraph 5.10). Under Section 39 of the Mental Health Act 1983 Regions can now be required to attend Court to give account of facilities which can be made available, either in their own Region or elsewhere.

iii. Alcohol Treatment Services should be locally based and although at the present time there are several Regional Alcohol Treatment units it is not expected that more of these will be developed. Most of them have adjusted, or are in the process of adjusting, the service they offer to a smaller catchment area based on single Districts or groupings of Districts. Future emphasis should be on district services which are multi-disciplinary and community based with back-up in-patient provision.

iv. *Drug Misuse.* Ministers regard the improvement of services for drug misusers as of the highest priority (see Circular HC(84)14/CHC(84)12). In planning services, Regions should take account of the advice in the reports by the Advisory Council on the Misuse of Drugs on Treatment and Rehabilitation (1982) and on Prevention (1984). Services for drug misusers should provide an adequate comprehensive multi-disciplinary network which should be firmly rooted in the community. In-patient detoxification facilities should be available at district level and increasingly the majority of services, including walk-in advice centres, day centres and access to laboratory facilities, should be centred in the District. There is also, however, a need for a Regional or sub-regional unit whose main role would be to offer services to the more disturbed drug misusers and act as a support and advice centre to District services. Close co-operation between health services, local authority social services departments and non-statutory agencies providing counselling and longer term residential rehabilitation is essential in developing an effective service.

v. *Solvent Misuse.* Services for solvent misusers should be multi-professional and locally based using existing skills, resources and powers to co-operate more effectively to discourage the practice of solvent misuse through education and persuasion. The health service has an important role in detecting the misuse of solvents by individuals and diagnosing and treating any adverse effects on their health. There is a need to identify the minority of children for whom solvent sniffing may have become the inappropriate response to other more severe problems and who will require specialist social work and psychiatric intervention. Doctors including general practitioners and those working in community based health services should work within multi-disciplinary networks and help adolescents with associated problems of which solvent inhalation may be a symptom. General practitioner and casualty departments may use – and through them other helping professionals have access to – the analytical services of the National Poisons Information Service to detect which solvents, if any, have been inhaled.

Staffing

14. i. *Medical.* The Department has agreed with the Royal College of Psychiatrists on an overall target of one consultant to 40,000 population for District services (although in the light of changing needs and changing consultant roles this is under discussion and may be revised). How work is distributed among the consultant psychiatrists in each District is a matter for local arrangement following discussion with the GPs being served, usually through the medium of the Local Medical Committee. Where there is geographical sectorisation this should be elastic enough to allow GPs some choice (and two-consultant sectors may have advantages over single-consultant sectors). Specialty and special responsibility appointments will need to cover the psychiatry of old age (and 'Care in Action' asks that each District should have at least one such psychiatrist); alcohol, drug and solvent misuse; forensic psychiatry; rehabilitation; child and adolescent psychiatry and psychotherapy. The Department has not formulated any targets for the numbers of consultants in the field of child and adolescent psychiatry. The Court Committee's recommendations for child psychiatry have been met in terms of overall numbers, but the regional picture is uneven.

ii. *Nursing.* The changing pattern of service will determine how many nurses of each grade a health authority will require. Matching to local needs means that no two services will be alike, particularly given the importance of testing different models of care. The White Paper goal of 100 nursing staff per 100,000 population has now been exceeded in most parts of the country, but there is not always a satisfactory balance of trained/untrained staff. Meeting the changing educational needs and ensuring satisfactory standards of nursing care require nurse managers and nurse educationalists to collaborate to plan basic and post-basic education. This should include preparation of the nurse to work in a variety of settings, including hospitals, residential care and the patient's own home. In developing personnel policies and arrangements for education and training, authorities must develop strategic manpower plans taking into account the supply of new recruits and also retention of existing staff during a period of change. Authorities should also seek to encourage nurses to return to mental illness nursing, eg the married woman whose children are now grown up. For this group, re-orientation and opportunities for further training are essential.

iii. Social workers with specialist knowledge, as well as generic social workers, are there to help patients and their families with problems arising from mental illness. They make a contribution to the treatment plan, care and after care and provide a link to the services and resources the community can offer. The Local Social Service Authority has to appoint sufficient numbers of Approved Social Workers under section 114 of the Mental Health Act 1983; and to provide social work support to the health service, either through hospital based social workers or through the area team. In all cases social workers, with special knowledge of the needs of mentally ill people and their families, can contribute as members of the multi-disciplinary teams.

iv. *Others.* Other key groups of staff, including occupational therapists, physiotherapists, other therapists (eg art, music, drama) and clinical psychologists, have important roles. Psychological factors are important both in the genesis and maintenance of certain problems and in the management of chronic handicaps and the prevention of further deterioration. Psychological techniques are important in assessment, treatment and rehabilitation. Physiotherapists have a key role in assessing patients' physical disorders and in maintaining and improving mobility. They can contribute to the physiological treatment of patients using various physical methods. They also share their skills with other staff to ensure safe and effective methods of lifting and handling. The number of physiotherapists working in hospital and in the community is at present exceedingly small and will need to increase to meet future needs and changes in policy.

Specialist occupational therapists play a significant role in the assessment, treatment and care of patients of all ages, by planning and providing therapeutic programmes. These help them improve personal and social performance, recognise and cope with the effects of mental illness, develop or improve skills related to work and leisure and achieve better community integration and an improved quality of life and improve physical well being. OTs are also involved in a training and advisory role in the NHS and SSDs. With the growing demand for OT, there is a national shortage – creating difficulties in filling funded posts as well as limiting development in the service. Regions should be encouraged to make forward plans to fund training. Industrial therapy also has a part to play in helping patients return to open employment or to enter sheltered workshops or sheltered placements; and in providing longer-term work opportunities.

Matters of Special Concern

A: *Mental Illness in Old Age*

15. Services for the 'psychiatry of old age' call for special attention. The need will continue to grow sharply for the next 10 years, as a result of the increasing numbers in the oldest age groups. A specialised service can best meet this need; detailed advice on establishment of such a service is contained in the HAS document 'The Rising Tide'. The need is for a comprehensive service which recognises that most old people with mental illness are living at home and that they and their families need basic community services with access to specialist services. Multi-disciplinary assessment is always desirable before decisions are taken on where an old person can live. Needs span health and local authority domiciliary care, including specialist community psychiatric nurses; residential care and in-patient care. All Districts

which do not have local in-patient care should make an early start on providing some suitable accommodation within the District, served by a consultant psychiatrist with a special responsibility for elderly people. (See 'Care in Action' paragraph 5.9(b)).

B: *Development of District Services*

16. In many Districts, a psychiatric hospital forms a base for the local services. Such a hospital, if it is suitably situated in relation to the population of the District in which it is built, can continue to form the base for a comprehensive psychiatric service for that District. The priority tasks in each Region – identified in Regional and District planning – will be building up new patterns of comprehensive services in the District which do not have a suitable psychiatric hospital, adjusting catchment areas appropriately; while at the same time planning and executing the closure of hospitals which are not being fitted into the new pattern of services in this way. (See 'Care in Action' paragraph 5.9).

17. In preparing their 10-year strategic plans Regions are deciding on a *Regional strategy for psychiatric services, including hospital closure* where relevant. (Paragraph 4 of HC(82)6 indicates the Region's role in connection with such planning). In the last 25 years the number of in-patients has fallen from 145,000 to about 67,000 of whom about 54,000 are in the 100 or so traditional hospitals. On average, therefore, the number of patients in the latter has fallen by more than half and will continue to fall over the next 10 years, as a result of not only therapeutic advances but three other factors:

i. Regional programmes to establish psychiatric departments in district general hospitals (there are currently about 80 such departments, each with over 50 beds and a slightly smaller number with fewer beds).

ii. Authorities making better progress with providing local accommodation in each District for elderly patients, often by adaptation (paragraph 15 above).

iii. The number of 'old long stay' patients remaining in the traditional hospitals reducing by about 2,000 annually, partly by discharge, but mainly by the death of the oldest patients.

18. Money saved through the reduction in the number of in-patients should enable progress to be made in establishing good District services. (Paragraph 2.3.4 of the current Land Transactions handbook requires receipts from sales of land etc from hospitals for mentally ill or mentally handicapped people to be used to develop the relevant services). But reduction in numbers are unlikely to produce matching cost savings unless a hospital is closed. Such closures should be carefully planned, probably not under 5 years ahead, in the context of regional strategy. The first stage of such a strategy may be to plan the steps by which catchment areas will be aligned with District boundaries and the successive adjustments to revenue allocations needed to allow development in a District which had previously looked to a neighbouring District for psychiatric care. Movements of both patients and staff need to be worked out so as to minimise the disadvantages to individuals and maximise the advantages. The closure of hospitals is a consequence, not a cause, of the reduction of in-patient care. Patients who would be better off outside hospital should have a planned discharge to suitable care even if no closure is foreseen; patients who are better off in in-patient care should continue to receive such care, by a transfer if necessary, even if a closure is planned.

19. New facilities must be available before old facilities are dispensed with. Regions may experience resource difficulties in funding replacement provision in advance of the closure of older mental illness hospitals. Most authorities have developed strategies for developing bridging funds and other financial mechanisms to assist the creation of new community services. All Regions will need such mechanisms which should be so designed that the flow of funds is appropriate to Districts' needs, plans and existing resources. If the programming of capital developments poses problems. Regions may wish to take advantage of the brokerage arrangements operated by the Department between pairs of Regions which have complementary mismatches of capital resources and requirements.

C: *Adolescent Services*

20. There are currently some problems in the provision of services for adolescents with behavioural or developmental disorders. The small numbers involved making planning difficult at District level and Regions should take a close interest in this subject. Particular thought needs to be given to the potential difficulty of providing comprehensive services economically where numbers are small and the philosophy of care is to retain local links with family and friends; and also to the need to match the service to the actual needs. (Some Regions have relied on specialist units which together have enough beds to meet the Regions's needs, but find that the admission policies of the various units do not together match the needs which arise for in-patient care, so that the units have empty beds while eg the local authorities children's departments find themselves providing care for young people who need psychiatric care). The Health Advisory Service is conducting a special exercise during the course of 1985 to look at service provision for this group and aims to produce guidance for authorities early in 1986.

Policy and Management

21. The Psychiatric Services Management Teams described in the Nodder Report need to be re-considered in the light of changes in management structure below District level (eg HC(80)8), the continuing development of unit management and the more recent guidance (HC(84)13) on the role of general managers, which emphasises the link between better management and improved patient care. But the principles discussed in chapter 4 of the report still require attention in all Districts: the crucial importance of a link with the local authority at this level, the special problems

which can arise when care is divided between a psychiatric hospital and a psychiatric department in a DGH and the need to regard all the psychiatric services in the District as an entity in which in-patient services, out-patient services (of various sorts) and community services are linked.

APPENDIX ON BED AND DAY PLACES REQUIREMENTS

Introduction

1. The paper above brings together the relevant policies from a number of sources. This appendix sets out resource implications, as DHSS sees them.

2. This is not a blueprint. There is considerable variation between Districts, not only in facilities but also in the operational policies which determine how much a particular resource is used. Each District must plan individually, in consultation with the professional people involved.

3. Five planning headings can be used to analyse present and future provision in any District. This is a categorisation of accommodation etc, not of patients. In paragraphs 6–20 below each of the headings I–V is followed by discussion of the category and of the organisational factors that will affect the local need.

4. It will also be necessary to take account of any general population factors which affect the level of need; these have been discussed in the psychiatric literature.

5. First, determine the catchment area for each District at the relevant future dates. It should normally be adjusted until it corresponds with the District's general catchment areas and it is important that plans for adjustments should be made early, even if they cannot be executed at once. (As psychiatric resources improve, those concerned should be more willing to admit patients from other areas when GPs or patients wish this; meanwhile the catchment area ensures that every patient can gain admission somewhere).

I. BED NEEDS: THE PSYCHIATRIC DEPARTMENT

6. The 1975 White Paper tentatively estimated that the District general hospital psychiatric department if linked to other elements of health care (see below) and to the complementary social services might need about 0.5 beds per 1,000 population (paragraph 6 of enclosure to HM(71)97, paragraph 4.8 of White Paper).

7. Because in-patient stays have continued to get shorter, many services with a base in or adjacent to the DGH now use considerably less than 0.5 beds per 1,000. More information about current bed usage in district general hospital departments is expected from a study being undertaken by the Royal College of Psychiatrists in conjunction with the HAS. Meanwhile many mental illness hospitals have built up community elements and links which enable them to provide a 'DGH' type of service, in their admission and medium stay wards, so that a fairly similar ratio may be applicable to the relevant beds in these hospitals also. (When planning the building of a new department, it is of course relevant to ascertain how many beds are being used in the service which is to move into the department; though when the move takes place there may be a change in bed use, as a result of changes not only of environment but of staff).

8. It is likely that in most Districts analysis on these lines will suggest planning for between about 0.3 and 0.5 beds per 1,000. The absence of other elements of a community service, for example staffed hostels, will of course tend to increase the amount of in-patient care. Operational policies for the interaction between the main base and the other elements of in-patient care are also important. Creation of a separate assessment ward for elderly people (paragraph 10 below) as recommended in 'The Rising Tide' and in paragraph 4.ii of the main paper will reduce the beds to be planned in the general psychiatric wards commensurately; the same applies if it is also decided to provide separate accommodation for elderly people with functional illnesses. (If no elderly patients are to use the general ward, it may be sensible to calculate a bed ratio against the 0–65 or 15–65 population).

9. As well as in-patient accommodation the department may be expected to provide for day-patient and out-patient care: these are discussed in paragraphs 17 and 20 below. (In some Districts the department will be in effect divided between two locations.)

II. BED NEEDS: ACCOMMODATION FOR ELDERLY MENTALLY ILL PEOPLE

10. Whilst the majority of elderly people with mental disorder who require in-patient care are likely to be dealt with in the general psychiatric department (and be provided for within the 0.3–0.5/1,000 total population guideline) services for elderly people should include a ward for assessment and short-term treatment. This may have up to one bed per 1,000 population over 65 (again, from the 0.3–0.5 beds per 1,000 total population guideline) depending on how it is to be used. This ward should be in a DGH even where the rest of the psychiatric service may be elsewhere, because of the medical facilities that may be necessary. Where the main psychiatric service is in the DGH the assessment ward may be best placed within it though it should also be near the geriatric department. (The function now seen for the assessment ward is considerably wider than that proposed in HM(70)11, the main function of which was to enable patients to be correctly allocated between the psychiatric and the geriatric services).

11. Beds for elderly patients requiring continuing in-patient care or admitted to provide relief for supporters will also be needed. Since it is mainly dementia patients who require this, in practice the need to be met is equivalent to the need for what was once known as ESMI beds. Given the increased proportion of very old people among the over-65 population, the level of care intended in the guideline in HM(72)71 is now equivalent to about three beds per 1,000 over 65. (This is in addition to beds provided within the guideline 0.3–0.5 per 1,000 total population for general psychiatry.) The beds should be in small units in local hospitals close to the community where the patient has lived and thus easily accessible to family and friends. These units, which do not need to be on the DGH site, will provide beds for continuing in-patient care together with some for short-term relief or respite care. The need for continuing care and respite care beds will vary according to the pattern of care provided and other factors (eg the proportion of elderly people isolated from their families; the strength of alternative health and social services; the quantity of local authority residential accommodation and the authority's residential policies; the quantity of voluntary and private residential accommodation).

12. It should be emphasised that DHSS has followed professional practice in abandoning the distinction formerly made between 'the elderly severely mentally infirm' ie those suffering from forms of dementia and 'elderly people with other mental illness'. As indicated in 'The Rising Tide' the specialised hospital service for the psychiatry of old age would normally cover both functional illnesses and dementia but will not cover 'old long-stay' patients whose illness began when they were younger but who have become old while in in-patient care.

III. BED NEEDS: ACCOMMODATION FOR 'LONG-STAY PATIENTS'

13. The categorisation used for planning purposes is of accommodation, not patients, 'Long-stay' accommodation is a traditional term for the third major group of in-patient accommodation, which provides continuing care for patients who do not need the facilities of the admission wards (in the old pattern of care) or the psychiatric department (in the new pattern of care). The precise bed needs therefore depend on practice rather than statistics of length of stay: a psychiatrist may think it right to retain one patient in the district general hospital for two years or so to complete his treatment; another patient, particularly if he is known from earlier admissions, may be transferred to 'long-stay' accommodation very quickly.

14. The term 'old long-stay' has been used to denote those who became long-stay before modern methods of treatment and care had been developed. Nearly all the accommodation of such patients is in mental illness hospital. Although most of the accommodation is today occupied by patients who are over 65, the accommodation is not currently treated as part of the service for the psychiatry of old age ('The Rising Tide', paragraph 18).

15. 'New long-stay' patients are those who have become long-stay more recently – sometimes a fixed date such as the psychiatric census of 1971 is used. The distinction is not clear-cut; setting aside category II above, most of the long-stay patients who began their latest stay within the last 10 years or so are people who had earlier been 'old long-stay' patients. In Districts which are still served by a mental illness hospital there may be little practical value in distinguishing between 'new long-stay' and 'old long-stay'; for planning purposes, what is needed is a statistical calculation of probable future bed needs from the rate of decline of both 'old' and 'new' groups (either taken separately or together). Some assistance with such calculations, along with other advice on calculations of bed needs, is given in the OR publication 'The Provision of In-Patient Facilities for the Mentally Ill: A paper to assist NHS planners' (G Robertson) circulated to Regional statisticians in March 1981. (Rates of decline are not of course immutable: a hospital where the rate has been slow, because of little effort at rehabilitation, may provide scope for many discharges when a consultant with a special interest in rehabilitation is appointed).

16. The position is different in a District now served by a psychiatric department in a general hospital. Here 'new long-stay' patients may begin to accumulate within the district general hospital. The rate depends on the pattern of care and the use made of community facilities. An accumulation of 'new long-stay' patients in such a District requires the attention of planners because it is undesirable to let patients live in an acute ward and let the throughput in the DGH progressively decline and also undesirable to ask the mental illness hospital formerly responsible to take over the care of the DGH's unwanted patients. A possible solution of a hospital hostel (paragraph 4.v. of main paper) is discussed in paragraph 4.54 of the 1975 White Paper and in 'A hostel-ward for "new" long-stay patients' (Wykes/Wing: Psychological Medicine Monograph Supplement 2). This also lists some references bearing on rates of accumulation. A paper produced by DHSS Mental Health Division on the provision of Hospital Hostels for New Long-Stay Patients is available from Room C424, Alexander Fleming House, Elephant and Castle, London SE1 6BY.*

IV. DAY CARE

17. The 1975 White Paper suggested that day patients would need day hospital places at a rate of 0.30 per 1,000 population and that in-patients would need another 0.35 places; it envisaged that all or most of the day hospital care would be associated with the in-patient care on the district general hospital site; one advantage of this is that the patient can be under the same staff team as an in-patient and as a day-patient. 'The Rising Tide' suggested adding three psychogeriatric day hospital places per 1,000 over-65 population.

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*Tel 407 5522 Ext 7568.

18. Planning now envisages less in-patient care. This does not in itself suggest any need for less day places, since patients who are discharged earlier, or not admitted, may receive day care instead. 0.65 day places may still be needed, though now only say 0.25 will be needed for in-patients and 0.40 for day patients; but some Districts have found a lower level of need. See also paragraph 20.b. below.

19. In many Districts it is better to site at least some of the day hospital places away from the district general hospital, but in a central location accessible to the community. The use of 'travelling' day hospitals for areas with a wide geographic population distribution may be of value.

V. COMPLETING THE DISTRICT SERVICE

20. a. The other NHS elements of the District service do not have major capital implications but it is important that they should be planned in good time jointly by the health and social service staff concerned, so that for example changed patterns of out-patient clinics, or convenient locations where community psychiatric nurses and social workers can meet, can be arranged with all those concerned.

b. It is particularly important that Health and Social Service Authorities should combine in the planning of day hospitals and day centre care. It may sometimes be desirable to offer forms of combined day care; and in all areas the pattern of the two types of facilities should make a sensible whole. Day hospitals and day centres for elderly patients need separate consideration. Where transport is required for patients, it is important that arrangements be considered and discussed with the ambulance service and any other body which may be involved in its provision, at the planning stage.

21. Plans also need to be made for the specialised services discussed in paragraph 13 of the main paper, often on a Regional or sub-regional basis. Here the RHA has a special responsibility in securing plans which amount overall to a comprehensive Regional service to meet each need (see HC(82)6, Appendix A, paragraph 2.2). (The guideline in HM(64)4 for child psychiatric beds is now regarded as too high).

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*Now superseded by this revised Health Building Note, HBN 35 – 'Accommodation for people with acute mental illness'.

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